Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTANXR1625

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page for STN Seminar Schedule - N. America
NEWS 2	MAY 01	New CAS web site launched
NEWS 3	MAY 08	CA/CAplus Indian patent publication number format defined
NEWS 4	MAY 14	RDISCLOSURE on STN Easy enhanced with new search and display fields
NEWS 5	MAY 21	BIOSIS reloaded and enhanced with archival data
NEWS 6	MAY 21	TOXCENTER enhanced with BIOSIS reload
NEWS 7	MAY 21	CA/CAplus enhanced with additional kind codes for German patents
NEWS 8	MAY 22	CA/CAplus enhanced with IPC reclassification in Japanese patents
NEWS 9	JUN 27	CA/CAplus enhanced with pre-1967 CAS Registry Numbers
NEWS 10	JUN 29	STN Viewer now available
NEWS 11	JUN 29	STN Express, Version 8.2, now available
NEWS 12	JUL 02	LEMBASE coverage updated
NEWS 13	JUL 02	LMEDLINE coverage updated
NEWS 14	JUL 02	SCISEARCH enhanced with complete author names
NEWS 15	JUL 02	CHEMCATS accession numbers revised
NEWS 16	JUL 02	CA/CAplus enhanced with utility model patents from China
NEWS 17	JUL 16	CAplus enhanced with French and German abstracts
NEWS 18	JUL 18	CA/CAplus patent coverage enhanced
NEWS 19	JUL 26	USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS 20	JUL 30	USGENE now available on STN
NEWS 21	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS 22	AUG 06	BEILSTEIN updated with new compounds
NEWS 23	AUG 06	FSTA enhanced with new thesaurus edition
NEWS 24	AUG 13	CA/CAplus enhanced with additional kind codes for granted patents

NEWS EXPRESS	29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 06:05:39 ON 14 AUG 2007

=> file reg
COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION
FULL ESTIMATED COST | 0.21 | 0.21

FILE 'REGISTRY' ENTERED AT 06:05:48 ON 14 AUG 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 13 AUG 2007 HIGHEST RN 944501-68-2
DICTIONARY FILE UPDATES: 13 AUG 2007 HIGHEST RN 944501-68-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

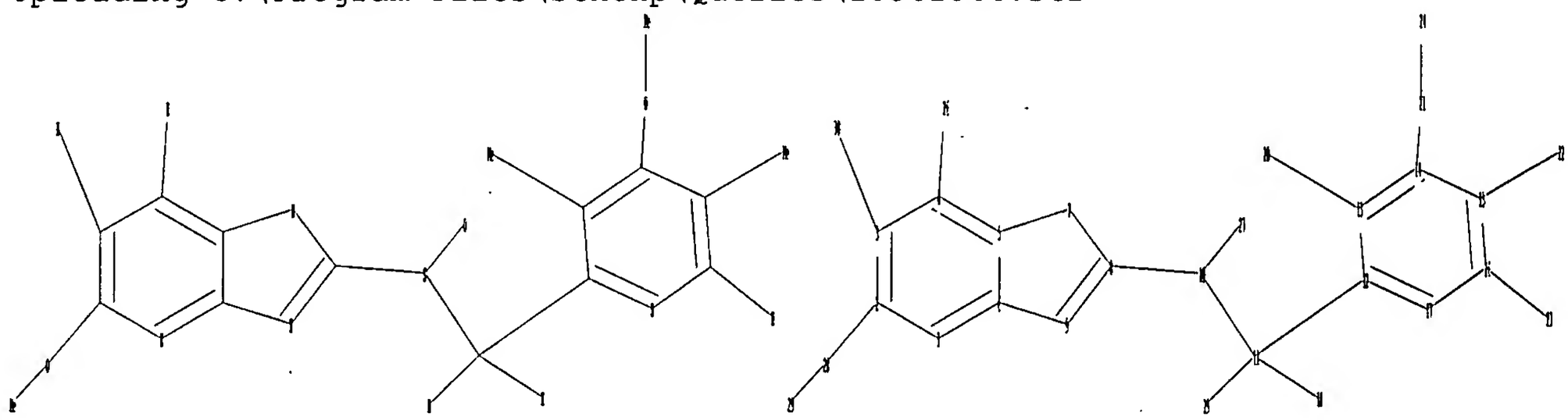
TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\10561844.str



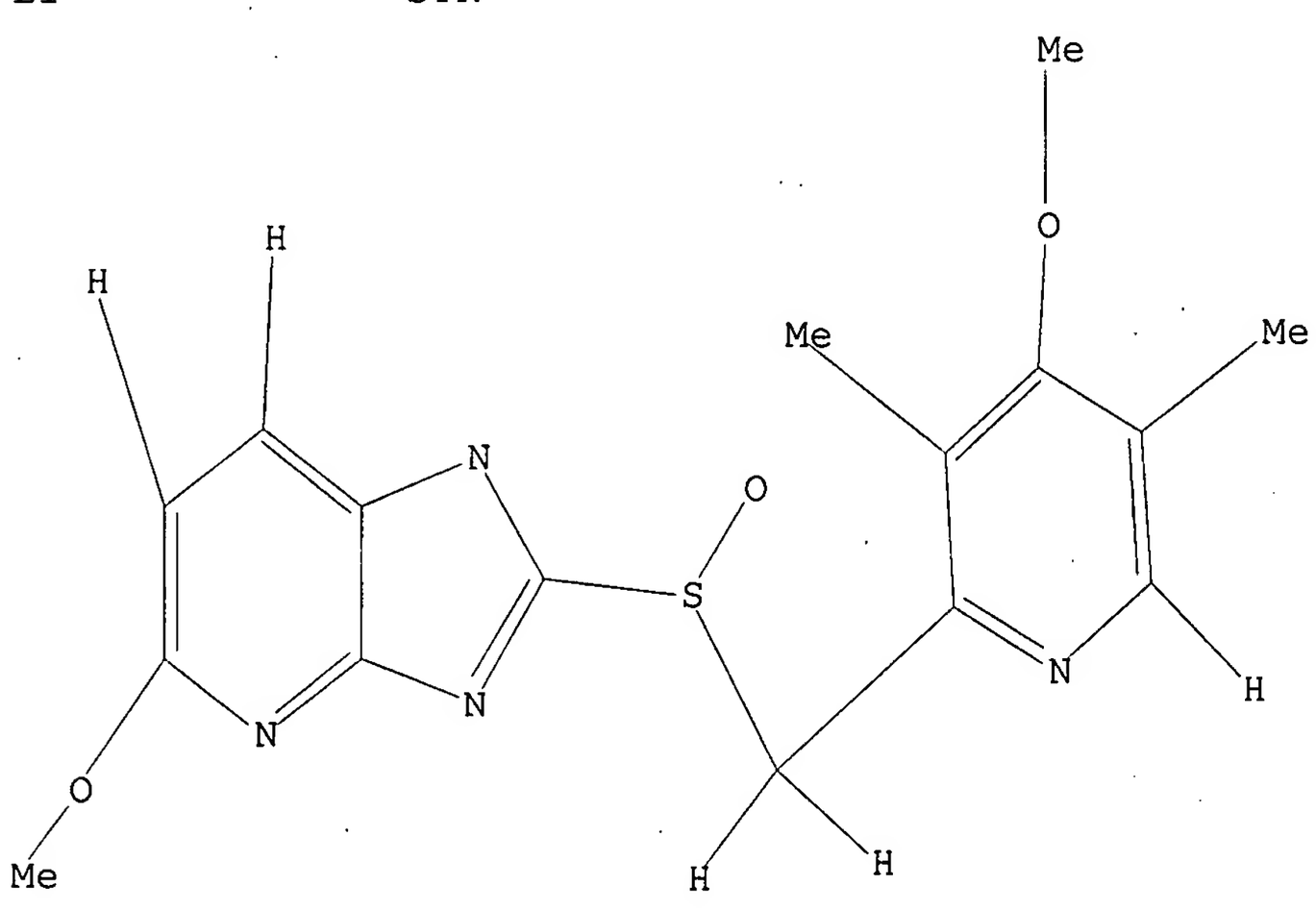
chain nodes :
10 11 18 19 20 21 22 23 24 26 27 28 29 30
ring nodes :
1 2 3 4 5 6 7 8 9 12 13 14 15 16 17
chain bonds :
2-28 3-30 4-26 8-10 10-11 10-27 11-12 11-18 11-19 13-20 14-21 15-22
16-23 21-24 28-29
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 12-13 12-17 13-14 14-15 15-16
16-17
exact/norm bonds :
2-28 5-7 6-9 7-8 8-9 8-10 10-11 10-27 14-21
exact bonds :
3-30 4-26 11-12 11-18 11-19 13-20 15-22 16-23 21-24 28-29

normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 12-13 12-17 13-14 14-15 15-16 16-17
isolated ring systems :
containing 1 : 12 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 26:CLASS 27:CLASS 28:CLASS
29:CLASS 30:CLASS

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1
SAMPLE SEARCH INITIATED 06:06:06 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 9 TO ITERATE

100.0% PROCESSED 9 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 9 TO 360
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 06:06:12 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 216 TO ITERATE

100.0% PROCESSED 216 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

L3 0 SEA SSS FUL L1

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	172.10	172.31

STN INTERNATIONAL LOGOFF AT 06:06:18 ON 14 AUG 2007

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTANXR1625

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1 Web Page for STN Seminar Schedule - N. America
NEWS 2 MAY 01 New CAS web site launched
NEWS 3 MAY 08 CA/CAplus Indian patent publication number format defined
NEWS 4 MAY 14 RDISCLOSURE on STN Easy enhanced with new search and display fields
NEWS 5 MAY 21 BIOSIS reloaded and enhanced with archival data
NEWS 6 MAY 21 TOXCENTER enhanced with BIOSIS reload
NEWS 7 MAY 21 CA/CAplus enhanced with additional kind codes for German patents
NEWS 8 MAY 22 CA/CAplus enhanced with IPC reclassification in Japanese patents
NEWS 9 JUN 27 CA/CAplus enhanced with pre-1967 CAS Registry Numbers
NEWS 10 JUN 29 STN Viewer now available
NEWS 11 JUN 29 STN Express, Version 8.2, now available
NEWS 12 JUL 02 LEMBASE coverage updated
NEWS 13 JUL 02 LMEDLINE coverage updated
NEWS 14 JUL 02 SCISEARCH enhanced with complete author names
NEWS 15 JUL 02 CHEMCATS accession numbers revised
NEWS 16 JUL 02 CA/CAplus enhanced with utility model patents from China
NEWS 17 JUL 16 CAplus enhanced with French and German abstracts
NEWS 18 JUL 18 CA/CAplus patent coverage enhanced
NEWS 19 JUL 26 USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS 20 JUL 30 USGENE now available on STN
NEWS 21 AUG 06 CAS REGISTRY enhanced with new experimental property tags
NEWS 22 AUG 06 BEILSTEIN updated with new compounds
NEWS 23 AUG 06 FSTA enhanced with new thesaurus edition
NEWS 24 AUG 13 CA/CAplus enhanced with additional kind codes for granted patents

NEWS EXPRESS 29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8

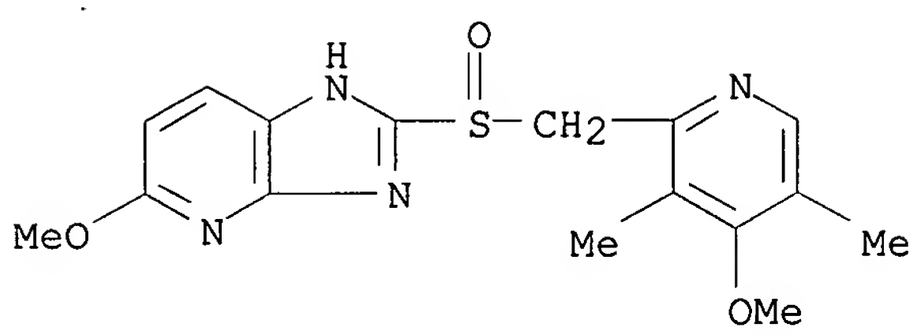
Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 06:26:54 ON 14 AUG 2007

```
=> file reg
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILE 'REGISTRY' ENTERED AT 06:27:02 ON 14 AUG 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   13 AUG 2007  HIGHEST RN 944501-68-2
DICTIONARY FILE UPDATES:  13 AUG 2007  HIGHEST RN 944501-68-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> s S-tenatoprazole/cn
L1             0 S-TENATOPRAZOLE/CN

=> s tenatoprazole
L2            14 TENATOPRAZOLE

=> s tenatoprazole/cn
L3             1 TENATOPRAZOLE/CN

=> d l3

L3   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2007 ACS on STN
RN   113712-98-4  REGISTRY
ED   Entered STN:  09 Apr 1988
CN   3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-
     pyridinyl)methyl]sulfinyl]-  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-
     pyridinyl)methyl]sulfinyl]- (9CI)
OTHER NAMES:
CN   (±)-Tenatoprazole
CN   5-Methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridyl)methyl]sulfinyl]-1H-
     imidazo[4,5-b]pyridine
CN   Tenatoprazole
CN   TU 199
MF   C16 H18 N4 O3 S
CI   COM
SR   CA
LC   STN Files:   ADISINSIGHT, ADISNEWS, ANABSTR, BIOSIS, CA, CAPLUS, CASREACT,
       CHEMCATS, CSCHEM, EMBASE, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA,
       MEDLINE, PHAR, PROMT, PROUSDDR, SCISEARCH, SYNTHLINE, TOXCENTER, USAN,
       USPAT2, USPATFULL
```



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

104 REFERENCES IN FILE CA (1907 TO DATE)
9 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
105 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d his

(FILE 'HOME' ENTERED AT 06:26:54 ON 14 AUG 2007)

FILE 'REGISTRY' ENTERED AT 06:27:02 ON 14 AUG 2007
L1 0 S S-TENATOPRAZOLE/CN
L2 14 S TENATOPRAZOLE
L3 1 S TENATOPRAZOLE/CN

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	17.70	17.91

STN INTERNATIONAL LOGOFF AT 06:28:01 ON 14 AUG 2007

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTANXR1625

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * * Welcome to STN International * * * * * * * * * * *

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	MAY 01	New CAS web site launched
NEWS	3	MAY 08	CA/CAplus Indian patent publication number format defined
NEWS	4	MAY 14	RDISCLOSURE on STN Easy enhanced with new search and display fields
NEWS	5	MAY 21	BIOSIS reloaded and enhanced with archival data
NEWS	6	MAY 21	TOXCENTER enhanced with BIOSIS reload
NEWS	7	MAY 21	CA/CAplus enhanced with additional kind codes for German patents
NEWS	8	MAY 22	CA/CAplus enhanced with IPC reclassification in Japanese patents
NEWS	9	JUN 27	CA/CAplus enhanced with pre-1967 CAS Registry Numbers
NEWS	10	JUN 29	STN Viewer now available
NEWS	11	JUN 29	STN Express, Version 8.2, now available
NEWS	12	JUL 02	LEMBASE coverage updated
NEWS	13	JUL 02	LMEDLINE coverage updated
NEWS	14	JUL 02	SCISEARCH enhanced with complete author names
NEWS	15	JUL 02	CHEMCATS accession numbers revised
NEWS	16	JUL 02	CA/CAplus enhanced with utility model patents from China
NEWS	17	JUL 16	CAplus enhanced with French and German abstracts
NEWS	18	JUL 18	CA/CAplus patent coverage enhanced
NEWS	19	JUL 26	USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS	20	JUL 30	USGENE now available on STN
NEWS	21	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS	22	AUG 06	BEILSTEIN updated with new compounds
NEWS	23	AUG 06	FSTA enhanced with new thesaurus edition
NEWS	24	AUG 13	CA/CAplus enhanced with additional kind codes for granted patents

NEWS EXPRESS 29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 06:11:03 ON 14 AUG 2007

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 06:11:12 ON 14 AUG 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 13 AUG 2007 HIGHEST RN 944501-68-2
DICTIONARY FILE UPDATES: 13 AUG 2007 HIGHEST RN 944501-68-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

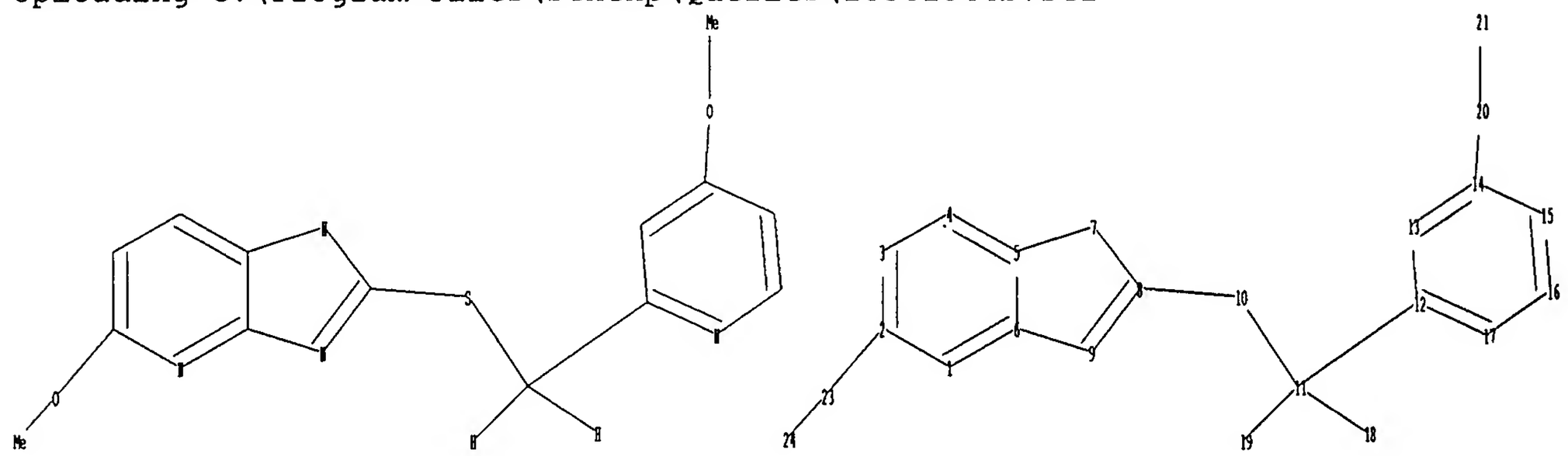
TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

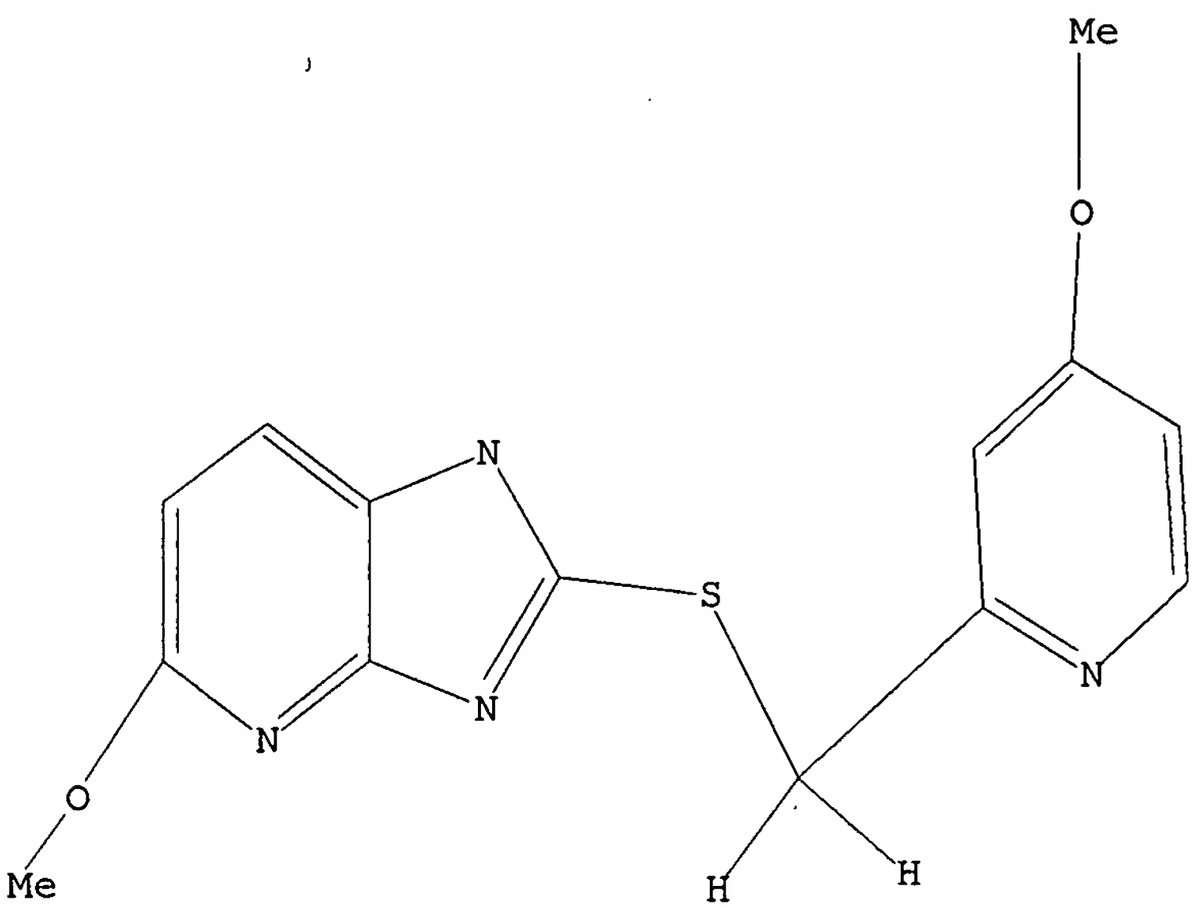
http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\10561844b.str



chain nodes :
10 11 18 19 20 21 23 24
ring nodes :
1 2 3 4 5 6 7 8 9 12 13 14 15 16 17
chain bonds :
2-23 8-10 10-11 11-12 11-18 11-19 14-20 20-21 23-24
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 12-13 12-17 13-14 14-15 15-16
16-17
exact/norm bonds :

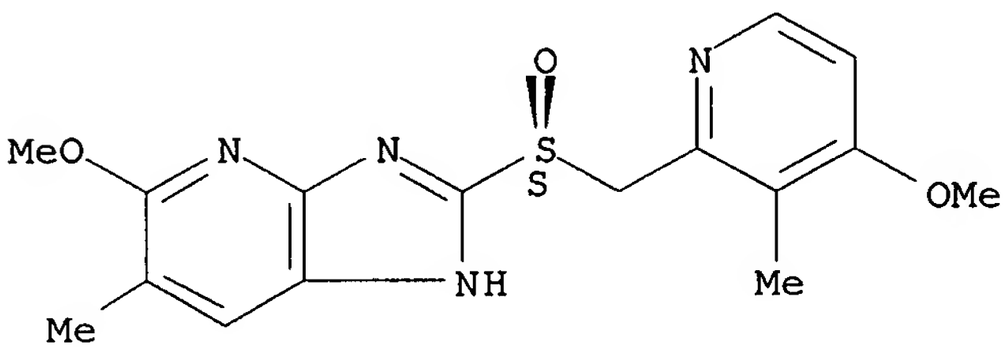
```
2-23  5-7  6-9  7-8  8-9  8-10  10-11  14-20
exact bonds :
11-12  11-18  11-19  20-21  23-24
normalized bonds :
1-2  1-6  2-3  3-4  4-5  5-6  12-13  12-17  13-14  14-15  15-16  16-17
isolated ring systems :
containing 1 : 12 :


Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:CLASS
11:CLASS  12:Atom  13:Atom  14:Atom  15:Atom  16:Atom  17:Atom  18:CLASS  19:CLASS
20:CLASS  21:CLASS  23:CLASS  24:CLASS



L1      STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1                  STR
```




```
Structure attributes must be viewed using STN Express query preparation.


=> s l1
SAMPLE SEARCH INITIATED 06:11:29 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -       12 TO ITERATE

100.0% PROCESSED       12 ITERATIONS                                 1 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:           33 TO      447
PROJECTED ANSWERS:               1 TO       80

L2             1 SEA SSS SAM L1

=> d l2
```

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
RN 868539-55-3 REGISTRY
ED Entered STN: 21 Nov 2005
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3-methyl-2-pyridinyl)methyl]sulfinyl]-6-methyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H18 N4 O3 S
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> s l1 full
FULL SEARCH INITIATED 06:11:49 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 369 TO ITERATE

100.0% PROCESSED 369 ITERATIONS 54 ANSWERS
SEARCH TIME: 00.00.01

L3 54 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	174.05	174.26

FILE 'CAPLUS' ENTERED AT 06:11:55 ON 14 AUG 2007

FILE COVERS 1907 - 14 Aug 2007 VOL 147 ISS 8
FILE LAST UPDATED: 13 Aug 2007 (20070813/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/infopolicy.html

=> s l3 full
L4 119 L3

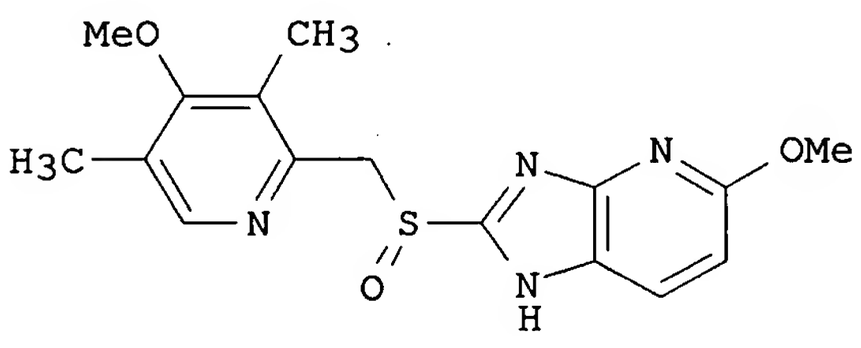
=> s l4 and py<2005
25027930 PY<2005
L5 50 L4 AND PY<2005

=> d ibib abs hitstr 1-10

L5 ANSWER 1 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:227058 CAPLUS
DOCUMENT NUMBER: 142:430268
TITLE: Preparation of (S)- and (R)-enantiomers of tenatoprazole as H+/K+ ATPase inhibitors
INVENTOR(S): Li, Shuxin; Zhao, Yanjin; Guo, Jinhua
PATENT ASSIGNEE(S): Institute of Radiomedicine, Academy of Military Medical Science of PLA, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 9 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
CN 1453278	A	20031105	CN 2002-117637		20020510 <--
PRIORITY APPLN. INFO.:			CN 2002-117289	A	20020423

OTHER SOURCE(S): CASREACT 142:430268
GI



H I

AB The invention is related to (S)- and (R)-enantiomers of tenatoprazole I and pharmaceutically acceptable salts thereof, their preparation and uses. (S)-I was synthesized by enantioselective oxidation of the corresponding sulfide with dicumyl peroxide in the presence of (i-PrO)4Ti and D-tartaric acid di-Et ester in 71.5% yield. (R)-I was obtained via oxidation of the corresponding sulfide with m-chloroperbenzoic acid followed by chiral HPLC resolution (37.5% yield). The two enantiomers showed stronger activity than omeprazole and comparable activity to tenatoprazole both in an inhibition assay against H+/K+ ATPase and in a gastric acid secretion-inhibition test in rat. Therefore, the invented compds. are useful for the treatment of gastric acid secretion disorders.

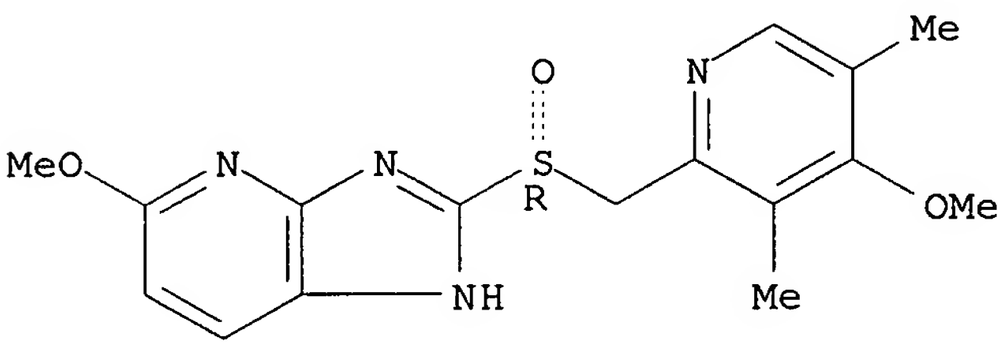
IT 705969-00-2P
RL: PAC (Pharmacological activity); PUR (Purification or recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of (S)- and (R)-enantiomers of tenatoprazole as H+/K+ ATPase inhibitors)

RN 705969-00-2 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(R)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT 705968-86-1P

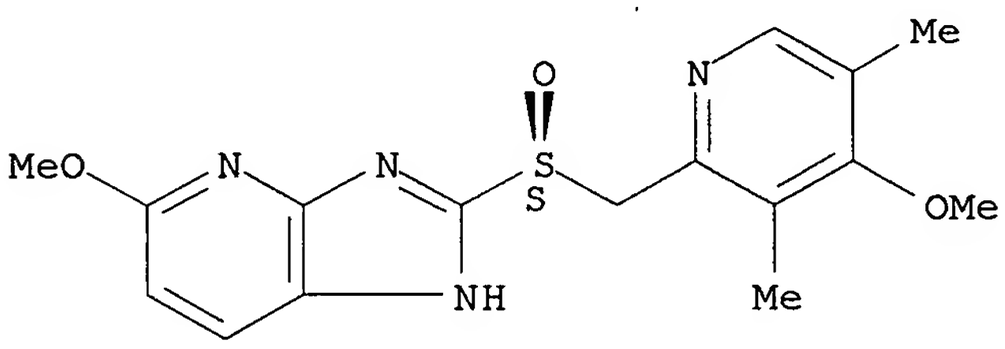
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of (S)- and (R)-enantiomers of tenatoprazole as H+/K+ ATPase inhibitors)

RN 705968-86-1 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3;5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



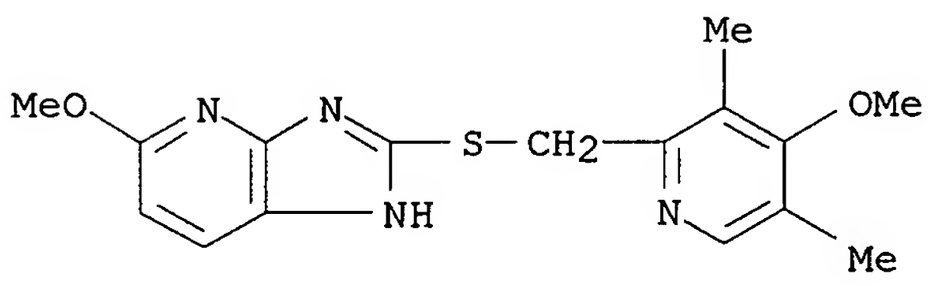
IT 113713-24-9P, 5-Methoxy-2-(((4-methoxy-3,5-dimethylpyridin-2-yl)methyl)thio)imidazolo[4,5-b]pyridine

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of (S)- and (R)-enantiomers of tenatoprazole as H+/K+ ATPase inhibitors)

RN 113713-24-9 CAPLUS

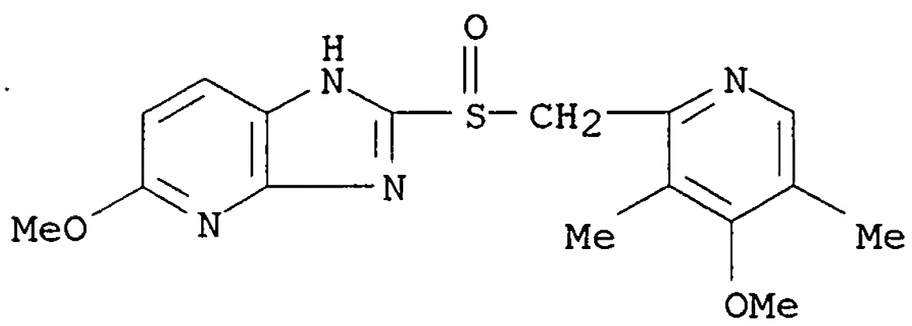
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]thio]- (CA INDEX NAME)



IT 113712-98-4P, Tenatoprazole

RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)

(reference; preparation of (S)- and (R)-enantiomers of tenatoprazole as H+/K+
ATPase inhibitors)
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 2 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:220143 CAPLUS
DOCUMENT NUMBER: 142:285224
TITLE: Pharmaceutical compositions comprising substituted benzimidazole proton pump inhibitors and buffering agents, and methods of use
INVENTOR(S): Phillips, Jeffrey O.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 56 pp., Cont.-in-part of U.S. Ser. No. 722,184.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

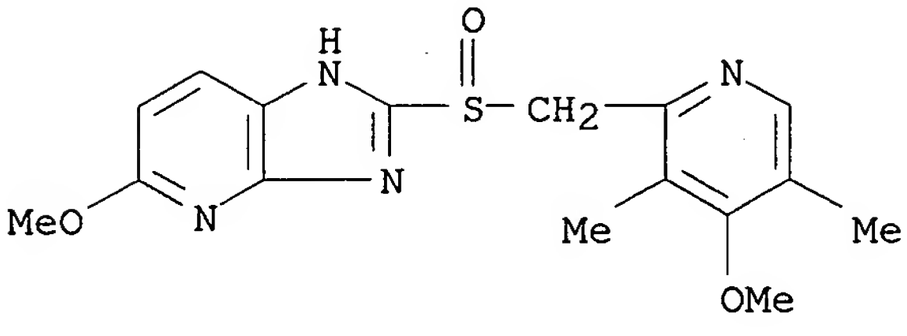
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005054682	A1	20050310	US 2004-898135	20040723
US 5840737	A	19981124	US 1996-680376	19960715 <--
US 6489346	B1	20021203	US 2000-481207	20000111 <--
US 2002045646	A1	20020418	US 2001-901942	20010709 <--
US 6645988	B2	20031111		
US 2003191159	A1	20031009	US 2002-54350	20020119 <--
US 6699885	B2	20040302		
US 2004171646	A1	20040902	US 2003-722184	20031125 <--

PRIORITY APPLN. INFO.:

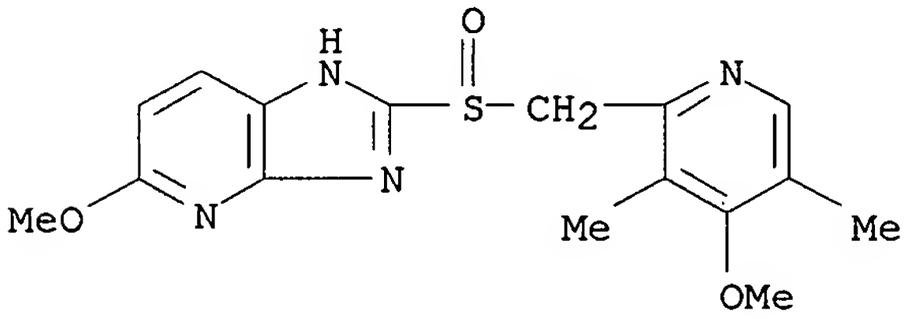
US 1996-9608P	P	19960104
US 1996-680376	A2	19960715
US 1998-183422	B2	19981030
US 2000-481207	A2	20000111
US 2001-901942	A2	20010709
US 2002-54350	A1	20020119
US 2003-722184	A2	20031125

AB The invention discloses, inter alia, pharmaceutical compns. comprising at least one proton pump inhibitor and at least one buffering agent. Compns. of the invention are useful in treating, inter alia, gastric acid related disorders.
IT 113712-98-4, Tenatoprazole 113712-98-4D, Tenatoprazole, derivs. and isomers
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical compns. comprising substituted benzimidazole proton pump inhibitors and buffering agents, and methods of use)
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-

pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 3 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:1033563 CAPLUS
DOCUMENT NUMBER: 142:28146
TITLE: Extended release compositions of proton pump inhibitors
INVENTOR(S): Wood, Ray
PATENT ASSIGNEE(S): Eisai Co., Ltd., Japan
SOURCE: PCT Int. Appl., 100 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004103291	A2	20041202	WO 2004-US15076	20040513 <--
WO 2004103291	A3	20050324		

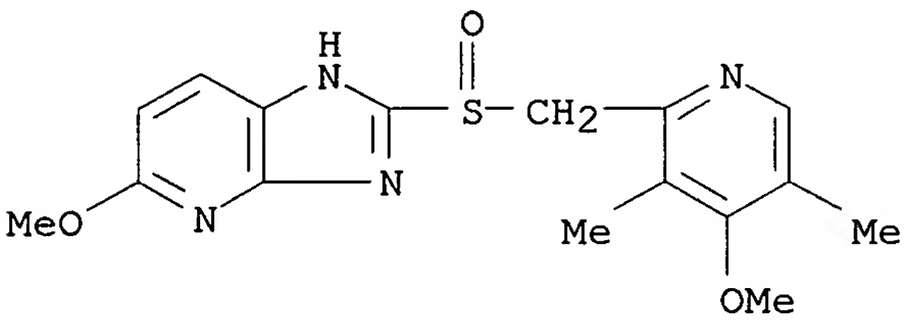
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-470876P P 20030516
US 2003-485744P P 20030710

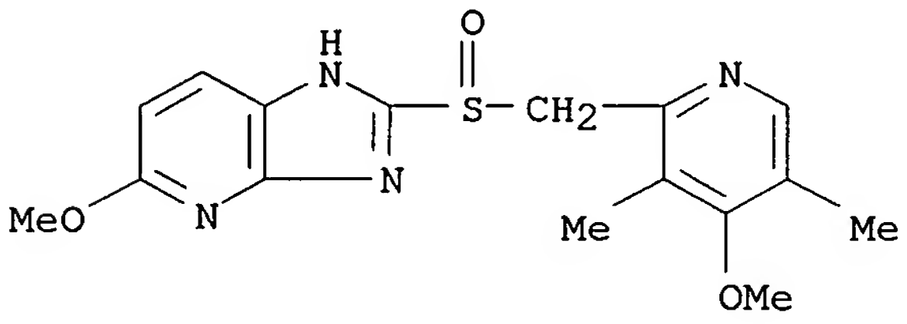
OTHER SOURCE(S): MARPAT 142:28146

AB The invention provides extended release compns. comprising at least one proton pump inhibitor. The invention also provides methods for treating gastrointestinal disorders by administering the compns. of the invention to patients in need of gastrointestinal therapy.

IT 113712-98-4, Tenatoprazole
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(extended release compns. of proton pump inhibitors)
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 4 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:968547 CAPLUS
DOCUMENT NUMBER: 142:28328
TITLE: Detection of related substances by RP-HPLC in tenatoprazole tablets
AUTHOR(S): Xu, Song-lin; Wang, Dong-kai; Liu, Lai; Gao, Fei; Cheng, Mao-sheng; Li, Hong-bin
CORPORATE SOURCE: Department of Pharmaceutics, Shenyang Pharmaceutical University, Shenyang, 110016, Peop. Rep. China
SOURCE: Zhongguo Xinyao Zazhi (2004), 13(9), 823-825
CODEN: ZXZHA6; ISSN: 1003-3734
PUBLISHER: Zhongguo Xinyao Zazhishe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB A method to determine the related substances in tenatoprazole tablets by RP-HPLC was established. The following assay conditions were established: Cra column (250 mm R 4.6mm, 5 m) as stationary phase; acetonitrile-phosphate buffers solution (30:70) as the mobile phase, and the detection wavelength at 306 nm. Separation of tenatoprazole from the related substances was attained. Three batches of samples were tested for the related substances. The result was 0.63%, 0.71%, 0.76%, resp. The simple and accurate method can be used to detect the related substances in tenatoprazole tablets.
IT 113712-98-4, Tenatoprazole
RL: ANT (Analyte); ANST (Analytical study)
(determination of tenatoprazole in tablets by RP-HPLC)
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 5 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:857598 CAPLUS
DOCUMENT NUMBER: 141:332197
TITLE: Method for the enantioselective preparation of

sulfoxide derivatives by asymmetric oxidation of sulfides with vanadium or tungsten catalysts and chiral ligands, and its application to the enantioselective preparation of tenatoprazole and omeprazole enantiomers

INVENTOR(S): Cohen, Avraham; Charbit, Suzy; Schutze, Francois; Martinet, Frederic

PATENT ASSIGNEE(S): Sidem Pharma, Luxembourg

SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004087702	A2	20041014	WO 2004-FR778	20040326 <--
WO 2004087702	A3	20041111		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
FR 2852956	A1	20041001	FR 2003-3914	20030328 <--
FR 2852956	B1	20060804		
FR 2863611	A1	20050617	FR 2003-14679	20031215
FR 2863611	B1	20060324		
CA 2520157	A1	20041014	CA 2004-2520157	20040326 <--
EP 1608649	A2	20051228	EP 2004-742382	20040326
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
CN 1823065	A	20060823	CN 2004-80008537	20040326
JP 2006523201	T	20061012	JP 2006-505762	20040326
MX 2005PA10250	A	20061012	MX 2005-PA10250	20050923
US 2006281782	A1	20061214	US 2006-551037	20060726

PRIORITY APPLN. INFO.:	FR 2003-3914	A	20030328
	FR 2003-14679	A	20031215
	WO 2004-FR778	W	20040326

OTHER SOURCE(S): MARPAT 141:332197

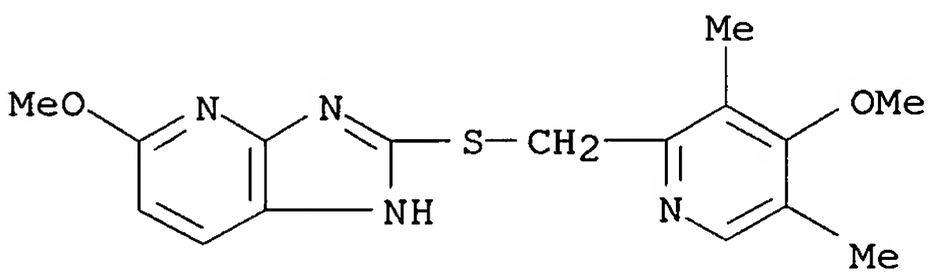
AB The invention relates to a method for the enantioselective preparation of substituted sulfoxide derivs. by asym. oxidation of corresponding sulfides. The method comprises enantioselective oxidation of a sulfide A-CH2-S-B, where A is a variably substituted pyridyl nucleus and B is a heterocyclic group with a benzimidazole or imidazopyridyl nucleus, by an oxidizing agent in the presence of a W- or V-based catalyst and a chiral ligand, followed, where necessary, by salt formation with a base, to give a sulfoxide: A-CH2-SO-B. The method is applicable to the enantioselective preparation of compds. such as the enantiomers of tenatoprazole and other comparable sulfoxides. Oxidants include H2O2, urea-H2O2, cumene hydroperoxide, and tert-BuOOH. Catalysts include WO3, vanadium acetylacetonate, and vanadium sulfate. Chiral ligands include amino alcs., amino ethers, amino acids and esters, and salicylaldehyde imine derivs. of these. For instance, the sulfide 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridyl)methyl]thio]imidazo[4,5-b]pyridine was oxidized by 30% H2O2 using WO3 and the chiral amino ether (DHQD)2-PYR (a cinchonan alkaloid) in THF at 4-5° to give (S)-(-)-tenatoprazole in 70% yield and > 90%

enantiomeric excess (ee). Recrystn. from MeOH/H2O or DMF/EtOAc increased the ee to > 99%. A similar run using (DHQ)2-PYR as the chiral ligand gave (R)-(+)-tenatoprazole in 99% ee after recrystn. from DMF/EtOAc. Likewise, using (DHQD)2-PYR, (S)-(-)-omeprazole was obtained in a yield of 72% and approx. 90% initial ee.

IT 113713-24-9, 5-Methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridyl)methyl]thio]imidazo[4,5-b]pyridine
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; enantioselective preparation of sulfoxides by asym. oxidation of sulfides with vanadium or tungsten catalysts and chiral ligands and application to tenatoprazole and omeprazole enantiomers)

RN 113713-24-9 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]thio]- (CA INDEX NAME)

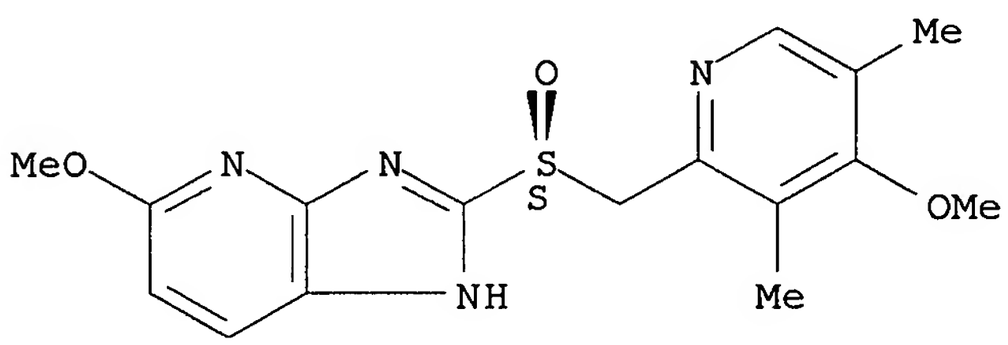


IT 705968-86-1P, (S)-(-)-Tenatoprazole 705969-00-2P, (R)-(+)-Tenatoprazole
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(target compound; enantioselective preparation of sulfoxides by asym. oxidation of sulfides with vanadium or tungsten catalysts and chiral ligands and application to tenatoprazole and omeprazole enantiomers)

RN 705968-86-1 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

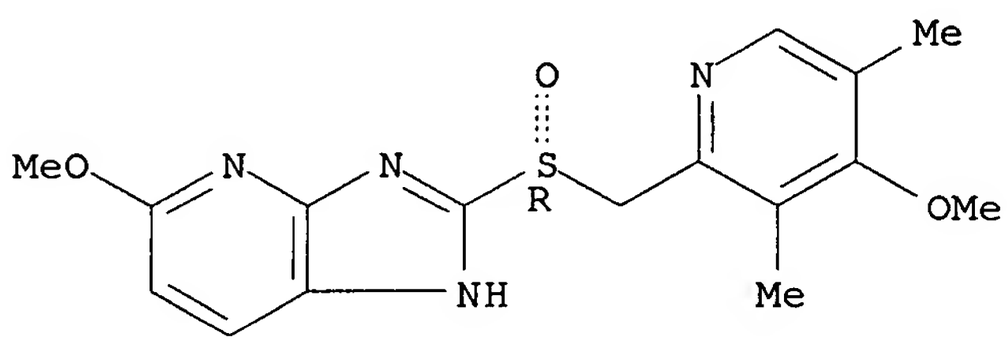
Absolute stereochemistry. Rotation (-).



RN 705969-00-2 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(R)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L5 ANSWER 6 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:800852 CAPLUS
DOCUMENT NUMBER: 141:314327
TITLE: Process for preparation of sulfoxides, in particular enantiomers of tenatoprazole and its related derivatives by enantioselective oxidation of sulfides
INVENTOR(S): Schutze, Francois; Charbit, Suzy; Cohen, Avraham; Martinet, Frederic
PATENT ASSIGNEE(S): Negma Gild, Fr.
SOURCE: Fr. Demande, 21 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2852956	A1	20041001	FR 2003-3914	20030328 <--
FR 2852956	B1	20060804		
CA 2520157	A1	20041014	CA 2004-2520157	20040326 <--
WO 2004087702	A2	20041014	WO 2004-FR778	20040326 <--
WO 2004087702	A3	20041111		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1608649	A2	20051228	EP 2004-742382	20040326
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
CN 1823065	A	20060823	CN 2004-80008537	20040326
JP 2006523201	T	20061012	JP 2006-505762	20040326
MX 2005PA10250	A	20061012	MX 2005-PA10250	20050923
US 2006281782	A1	20061214	US 2006-551037	20060726

PRIORITY APPLN. INFO.: FR 2003-3914 A 20030328
FR 2003-14679 A 20031215
WO 2004-FR778 W 20040326
OTHER SOURCE(S): MARPAT 141:314327
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

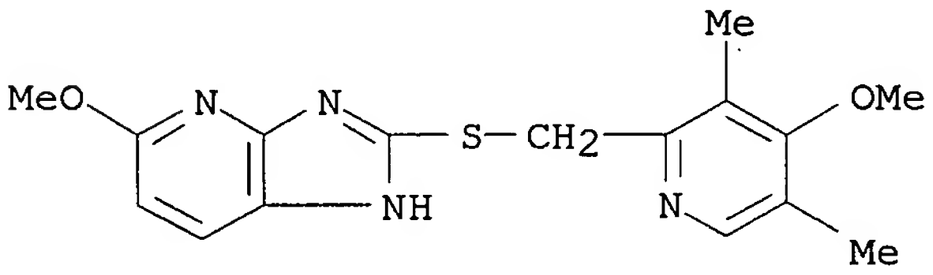
AB The invention is related to a method of preparation of sulfoxides and their basic salts, of formula A-CH2-S-B, in particular enantiomers of tenatoprazole (I) and derivs., by enantioselective oxidation of a sulfide of formula A-CH2-SO-B with an oxidation agent in the presence of a catalyst containing tungsten or of vanadium and of a chiral ligand, of formula RO-CR1R2-CR3R4-NR5R6, followed if necessary by base treatment [wherein A = substituted pyridinyl; B = benzimidazolyl, imidazopyridyl; R = H, alkyl, hetero/aryl; R1, R2, R3, R4 = independently alkyl, hetero/aryl with provisos; R5, R6 = alkyl; or NR5R6 = heterocyclyl, -N:CHAr; Ar =

substituted aryl]. The method provides high enantiomeric excess (e.e.) values (> 90%). Thus, oxidation of sulfide II with H2O2 in the presence of WO3, ligand III in THF gave (S)-(-)-I in > 99% e.e.

IT 113713-24-9, 5-Methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridyl)methyl]thio]imidazo[4,5-b]pyridine
RL: RCT (Reactant); RACT (Reactant or reagent)
(sulfide starting material; preparation of sulfoxides, in particular enantiomers of tenatoprazole and its related derivs., by enantioselective oxidation of sulfides)

RN 113713-24-9 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]thio]- (CA INDEX NAME)

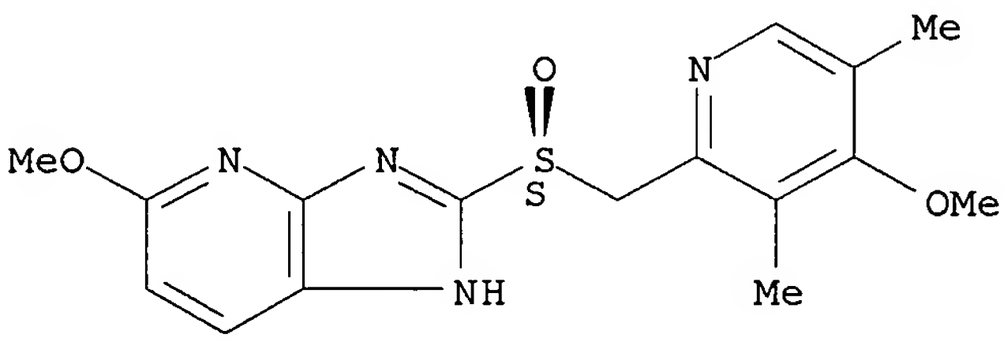


IT 705968-86-1P, (-)-5-Methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridyl)methyl]sulfinyl]imidazo[4,5-b]pyridine 705969-00-2P
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(sulfoxide product; preparation of sulfoxides, in particular enantiomers of tenatoprazole and its related derivs., by enantioselective oxidation of sulfides)

RN 705968-86-1 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

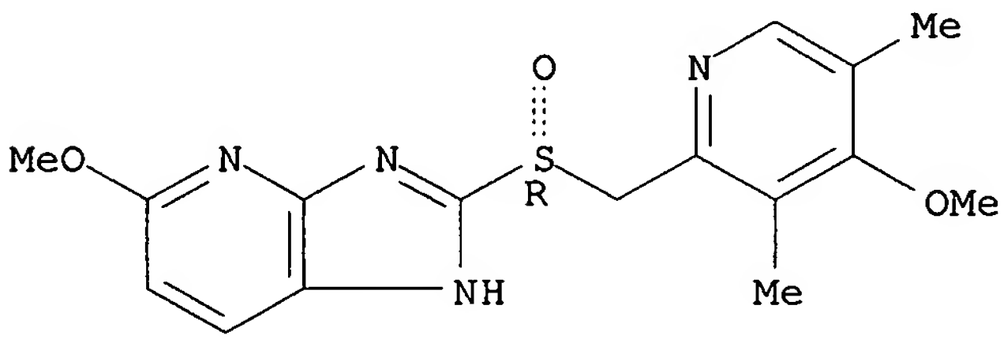
Absolute stereochemistry. Rotation (-).



RN 705969-00-2 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(R)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:799468 CAPLUS
DOCUMENT NUMBER: 141:320050
TITLE: Controlled-release compositions containing proton pump inhibitors
INVENTOR(S): Nagahara, Naoki; Miyamoto, Keiko; Akiyama, Yohko
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 243 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004082665	A1	20040930	WO 2004-JP3483	20040316 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2519208	A1	20040930	CA 2004-2519208	20040316 <--
JP 2004300149	A	20041028	JP 2004-75037	20040316 <--
EP 1607088	A1	20051221	EP 2004-720975	20040316
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
US 2006177509	A1	20060810	US 2005-549150	20050915

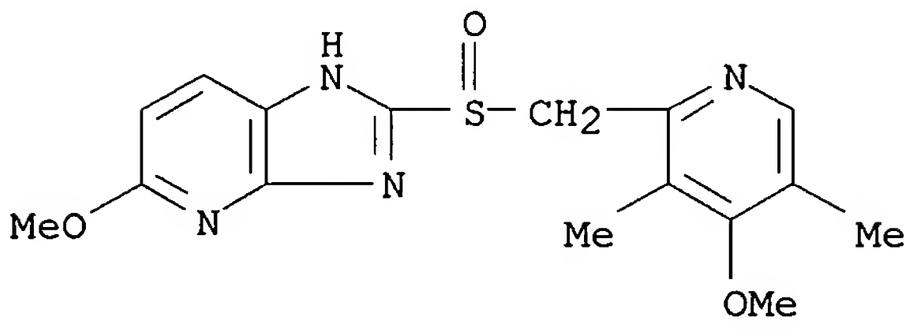
PRIORITY APPLN. INFO.:
JP 2003-72858 A 20030317
WO 2004-JP3483 W 20040316

AB It is intended to provide a controlled release composition in which the release of its active ingredient (a proton pump inhibitor) is controlled in two or more steps with different release speeds. This composition, which comprises (1) a release-controlling part A capable of controlling the release speed of the active ingredient at a definite level, and (2) a release-controlling part B capable of controlling the release speed of the active ingredient at a definite level which is lower than the release speed in the release-controlling part A, optionally together with (3) a release-controlling part C capable of controlling the release speed of the active ingredient at a definite level which is higher than the release speed in the release-controlling part B, if necessary, is characterized in that the release of the active ingredient in the release-controlling part B is first made followed by the release of the active ingredient in the release-controlling part A (in the case of having the release-controlling part C, the release of the active ingredient in the release-controlling part C is first made followed by the release of the active ingredient in the release-controlling part B). Thus, a core tablet prepared from R-lansoprazole 113, lactose 303, corn starch 50, low-substituted hydroxypropyl cellulose (L-HPC) 35 mg was layered with an outer layer material coating R-lansoprazole 33.8, hydroxypropyl Me cellulose (Metolose 65SH-4000) 116.3 mg to obtain a controlled-release tablet.

IT 113712-98-4, 5-Methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridyl)methyl]sulfinyl]-1H-imidazo[4,5-b]pyridine 705968-86-1 705969-00-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of proton pump inhibitors for controlled-release compns.)

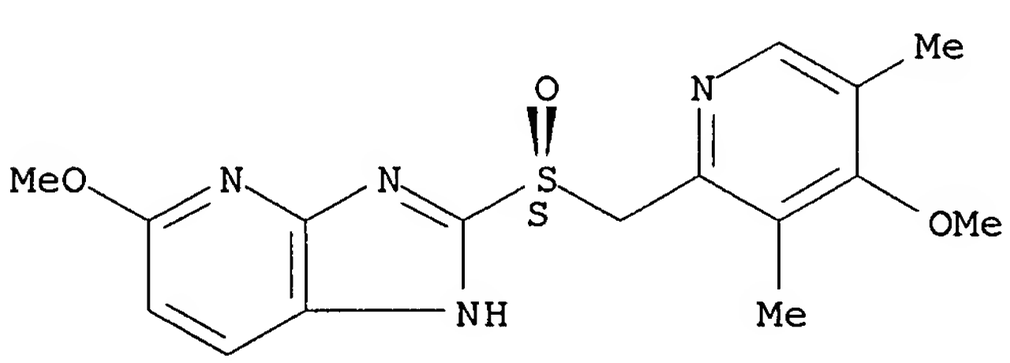
RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



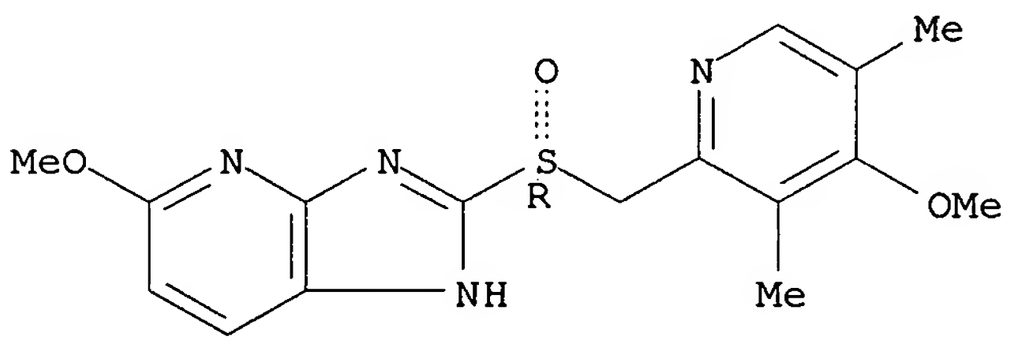
RN 705968-86-1 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 705969-00-2 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(R)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:780561 CAPLUS
DOCUMENT NUMBER: 141:254601
TITLE: Preventive or remedy for teeth grinding containing gastric acid inhibitors
INVENTOR(S): Miyawaki, Shouichi; Yamamoto, Teruko
PATENT ASSIGNEE(S): Eisai Co. Ltd., Japan
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

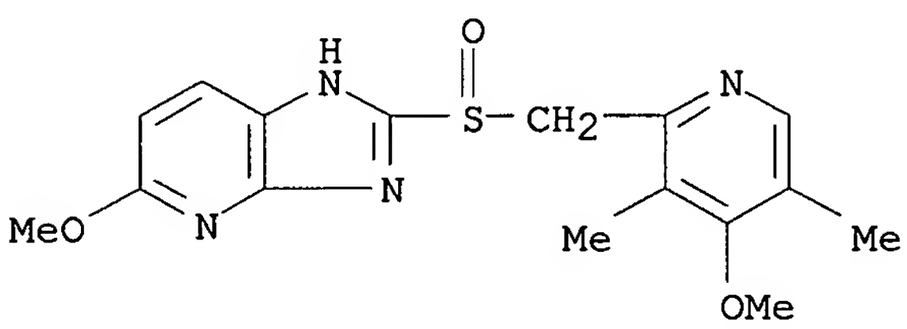
WO 2004080487		A1	20040923	WO 2004-JP939	20040130 <--
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1611901		A1	20060104	EP 2004-706869	20040130
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
US 2006173045		A1	20060803	US 2005-547796	20050906
PRIORITY APPLN. INFO.:				JP 2003-68755 A	20030313
				WO 2004-JP939 W	20040130

AB It is intended to provide a preventive or a remedy for teeth grinding and diseases relating thereto which contains as the active ingredient at least one member selected from among proton pump inhibitors, histamine H2 receptors and acid pump antagonists. Examples of the proton pump inhibitors include rabeprazole, omeprazole, esomeprazole, lansoprazole, pantoprazole, tenatoprazole, salts thereof and hydrates of the same. The effect of rabeprazole sodium salt tablet (Pariet) in patients with teeth grinding was examined

IT 113712-98-4, Tenatoprazole
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preventive or remedy for teeth grinding and teeth grinding-related disease containing gastric acid inhibitors)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 9 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:	2004:780521 CAPLUS
DOCUMENT NUMBER:	141:282815
TITLE:	Drug composition having active ingredient adhered at high concentration to spherical core
INVENTOR(S):	Yoneyama, Shuji; Bando, Hiroto
PATENT ASSIGNEE(S):	Takeda Chemical Industries, Ltd., Japan
SOURCE:	PCT Int. Appl., 237 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	Japanese
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2004080439	A1	20040923	WO 2004-JP3075		20040310 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
CA 2518780	A1	20040923	CA 2004-2518780		20040310 <--
JP 2004292442	A	20041021	JP 2004-66456		20040310 <--
EP 1602362	A1	20051207	EP 2004-719076		20040310
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK					
US 2006159760	A1	20060720	US 2005-548504		20050909
PRIORITY APPLN. INFO.:			JP 2003-66344	A	20030312
			WO 2004-JP3075	W	20040310

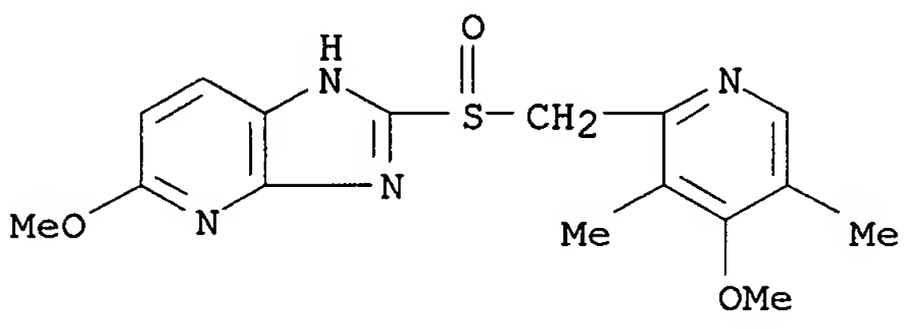
OTHER SOURCE(S): MARPAT 141:282815

AB Granule, fine particle or tablet of excellent leaching property, comprising a drug active ingredient in high content realized by forming a layer containing drug active ingredient on core particles through a combination of a method of dispersing and adhering an active ingredient while spraying or adding a binder with a method of spraying or adding a solution or suspension wherein an active ingredient and a binder are contained so as to effect adhesion. Further, there are provided a drug composition containing such a granule, fine particle or tablet and a process for producing the same. Thus, original granules of crystalline cellulose were prepared by spraying a composition (R)-lansoprazole (I), crystalline cellulose, magnesium carbonate, and hydroxypropyl cellulose to crystalline cellulose. The obtained granules were further coated with a 1st coating material containing I, magnesium carbonate, sucrose, and hydroxypropyl cellulose, a 2nd coating material containing hydroxypropyl Me cellulose, talc, and titanium oxide, and then an enteric coating material containing methacrylic acid copolymer, talc, macrogol, titanium oxide, and polysorbate 80, or another enteric coating material containing different methacrylic acid copolymers, talc, and tri-Et citrate. The granules with different enteric coatings were mixed and filled in capsules.

IT 113712-98-4, 5-Methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridyl)methyl]sulfinyl]-1H-imidazo[4,5-b]pyridine
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(preparation of drug composition containing proton pump inhibitors adhered at high concentration to spherical core)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:718538 CAPLUS
DOCUMENT NUMBER: 141:248724
TITLE: The enantiomers of tenatoprazole for therapeutic uses
INVENTOR(S): Yamashita, Setsuo; Ebina, Kengo
PATENT ASSIGNEE(S): Mitsubishi Pharma Corporation, Japan
SOURCE: PCT Int. Appl., 18 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004074285	A1	20040902	WO 2004-JP2087	20040223 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2512928	A1	20040902	CA 2004-2512928	20040223 <--
CN 1753893	A	20060329	CN 2004-80004946	20040223
JP 2006519224	T	20060824	JP 2006-502682	20040223
US 2006122216	A1	20060608	US 2005-546485	20051007
PRIORITY APPLN. INFO.:			JP 2003-46335 A	20030224
			WO 2004-JP2087 W	20040223

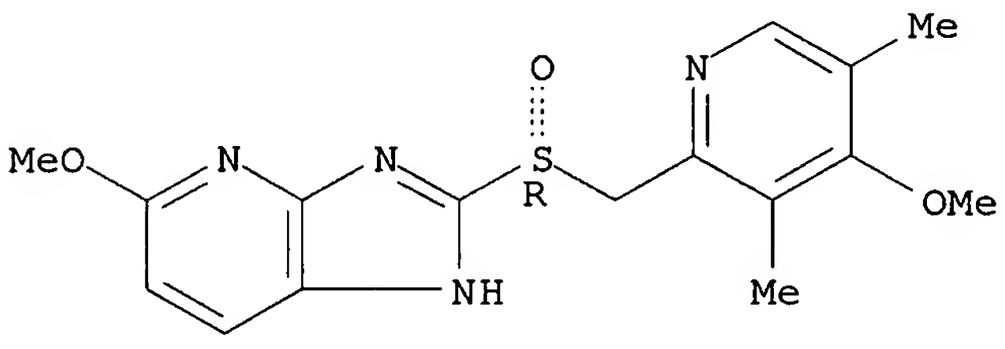
AB This invention relates to (+)- and (-)- enantiomers of tenatoprazole. The compds. and pharmaceutical compns. are useful as antiulcer agents. Thus, tablets contained (-)-tenatoprazole 30.0, lactose 40.0, aluminum hydroxide 17.5, hydroxypropyl cellulose 8.0, talc 4.5, TiO2 5.0, Mg stearate 20, and usual excipients 160.0 mg.

IT 705969-00-2P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
((+)-tenatoprazole; enantiomers of tenatoprazole for therapeutic uses)

RN 705969-00-2 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(R)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

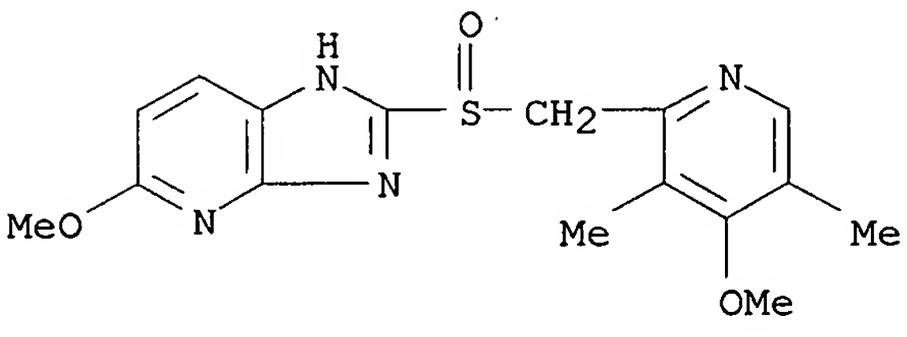
Absolute stereochemistry. Rotation (+).



IT 113712-98-4, Racemic-Tenatoprazole
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(enantiomers of tenatoprazole for therapeutic uses)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)

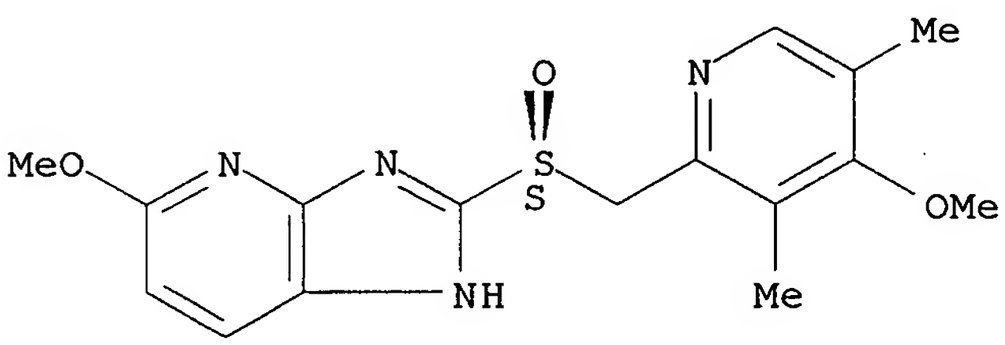


IT 705968-86-1, (-)-Tenatoprazole
RL: FMU (Formation, unclassified); THU (Therapeutic use); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses)
(enantiomers of tenatoprazole for therapeutic uses)

RN 705968-86-1 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

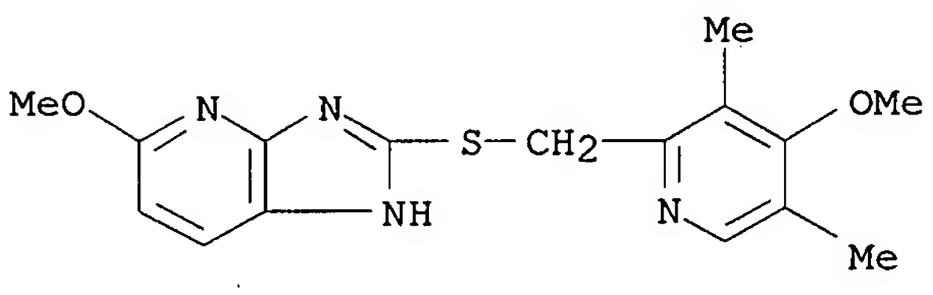
Absolute stereochemistry. Rotation (-).



IT 113713-24-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(enantiomers of tenatoprazole for therapeutic uses)

RN 113713-24-9 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]thio]- (CA INDEX NAME)

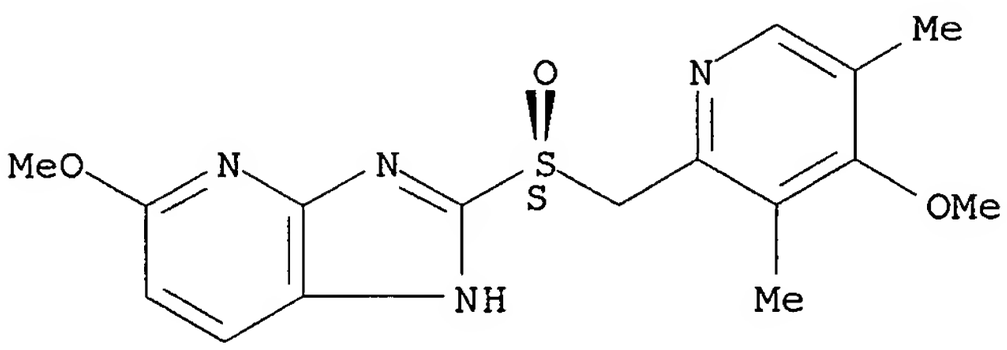


IT 705968-89-4, (-)-Tenatoprazole sodium salt 705968-92-9, (-)-Tenatoprazole potassium salt 705968-95-2, (-)-Tenatoprazole lithium salt 705968-98-5, (-)-Tenatoprazole magnesium salt 705968-99-6, (-)-Tenatoprazole calcium salt 705969-00-2D , magnesium complex 749250-96-2, (+)-Tenatoprazole sodium salt 749250-97-3, (+)-Tenatoprazole potassium salt 749250-98-4 , (+)-Tenatoprazole lithium salt 749250-99-5, (+)-Tenatoprazole calcium salt
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enantiomers of tenatoprazole for therapeutic uses)

RN 705968-89-4 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, sodium salt (9CI) (CA INDEX NAME)

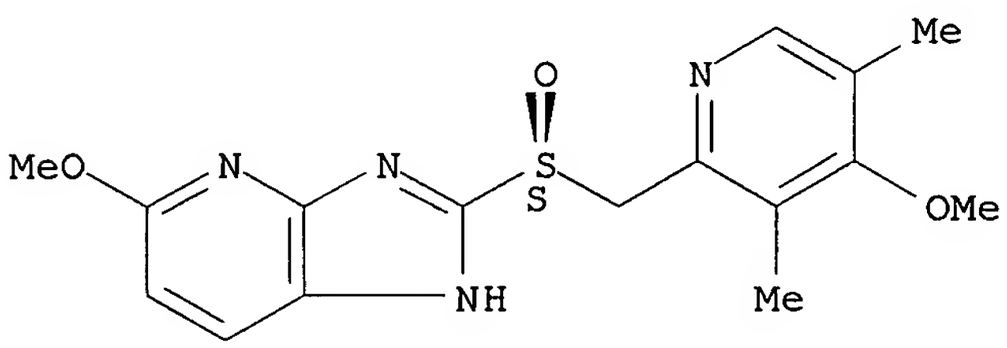
Absolute stereochemistry. Rotation (-).



● Na

RN 705968-92-9 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, potassium salt (9CI) (CA INDEX NAME)

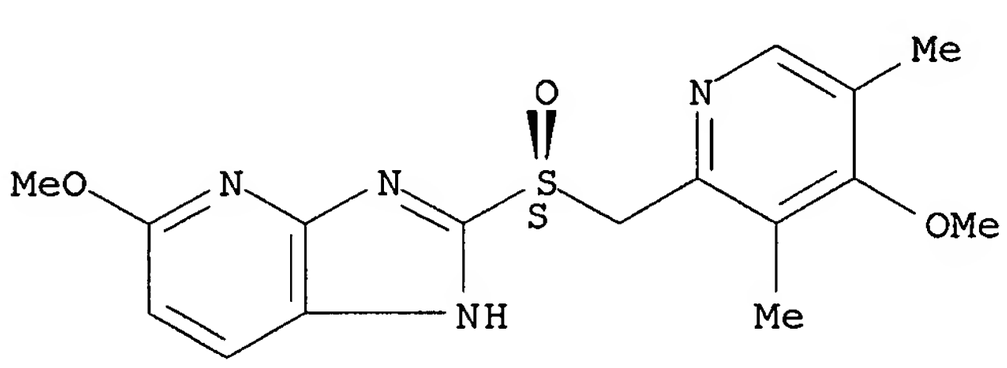
Absolute stereochemistry. Rotation (-).



● K

RN 705968-95-2 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, lithium salt (9CI) (CA INDEX NAME)

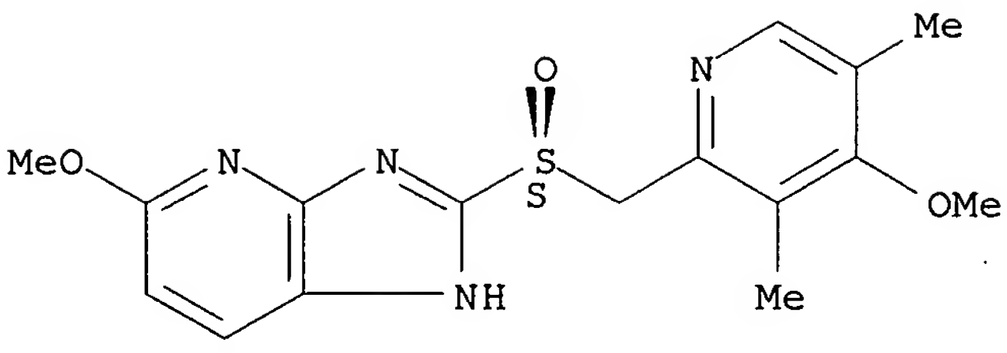
Absolute stereochemistry. Rotation (-).



● Li

RN 705968-98-5 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, magnesium salt (9CI) (CA INDEX NAME)

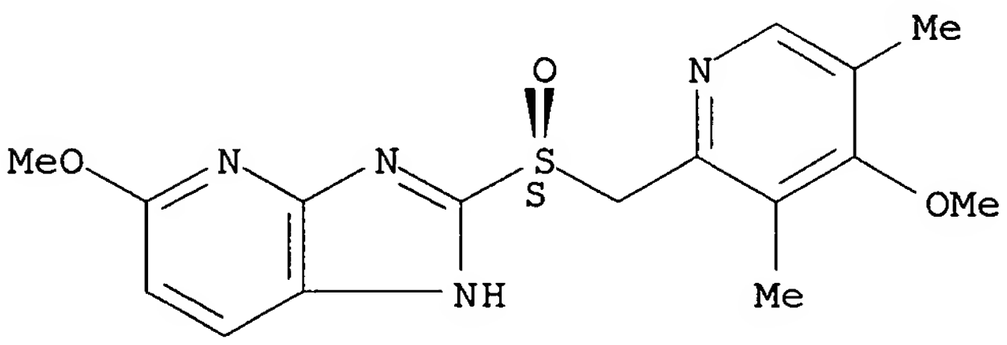
Absolute stereochemistry. Rotation (-).



●1/2 Mg

RN 705968-99-6 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, calcium salt (9CI) (CA INDEX NAME)

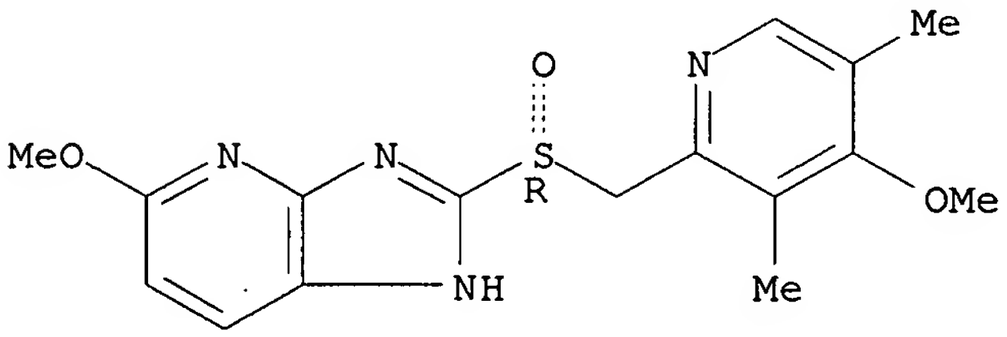
Absolute stereochemistry. Rotation (-).



●1/2 Ca

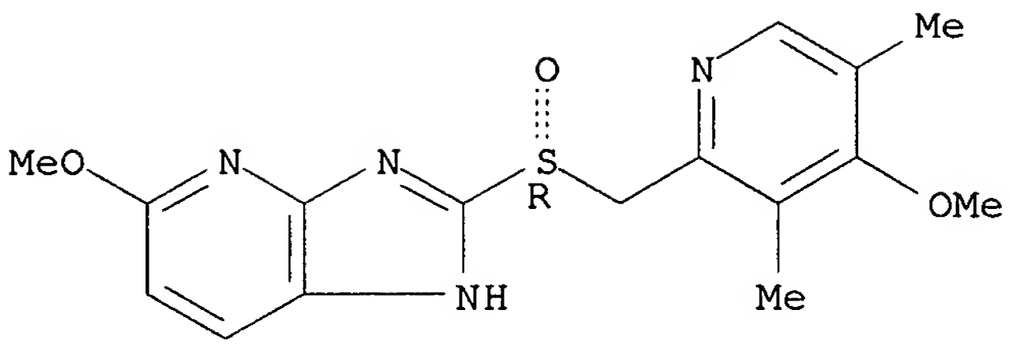
RN 705969-00-2 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(R)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 749250-96-2 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(R)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, sodium salt (9CI) (CA INDEX NAME)

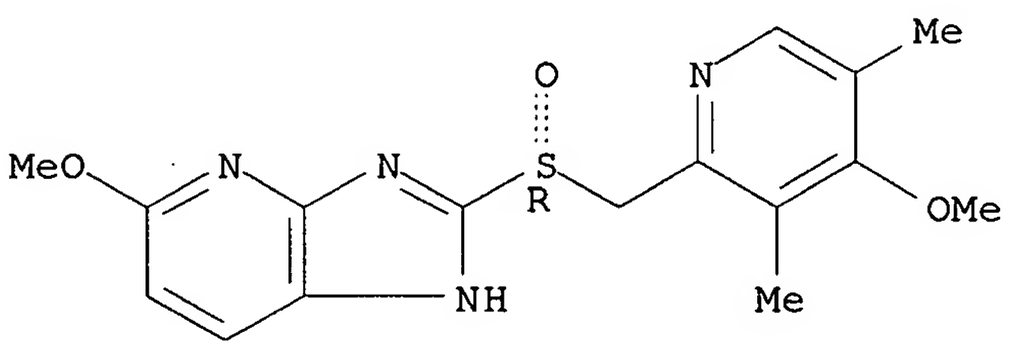
Absolute stereochemistry. Rotation (+).



● Na

RN 749250-97-3 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(R)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, potassium salt (9CI) (CA INDEX NAME)

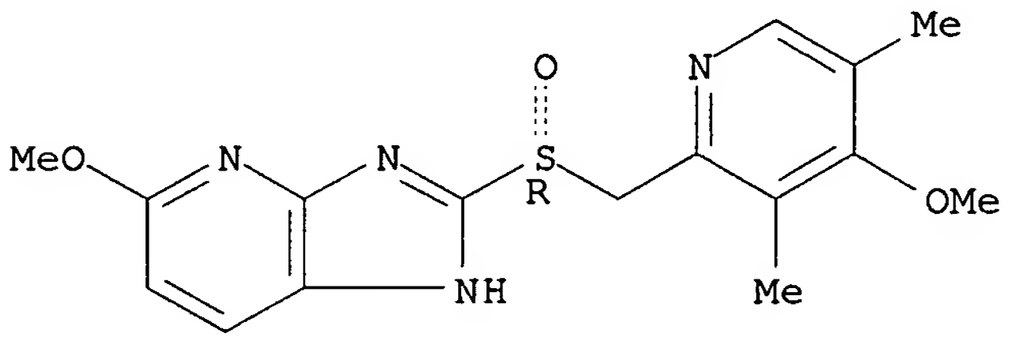
Absolute stereochemistry. Rotation (+).



● K

RN 749250-98-4 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(R)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, lithium salt (9CI) (CA INDEX NAME)

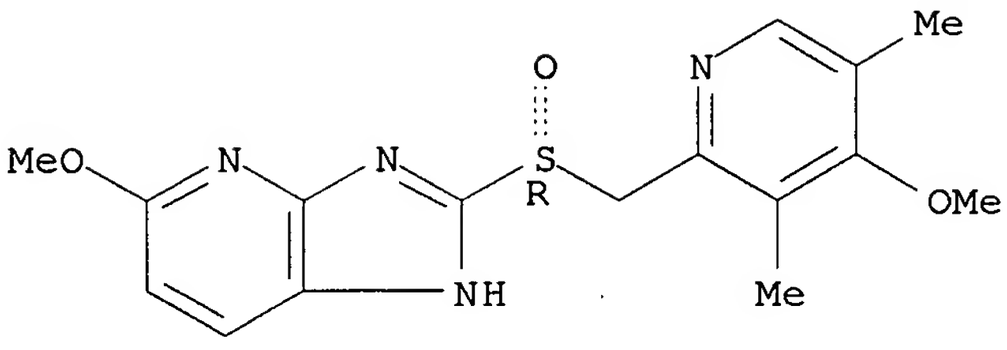
Absolute stereochemistry. Rotation (+).



● Li

RN 749250-99-5 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(R)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, calcium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



●1/2 Ca

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 11-50

L5 ANSWER 11 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:718322 CAPLUS
DOCUMENT NUMBER: 141:230698
TITLE: Omeprazole antacid complex-immediate release for rapid and sustained suppression of gastric acid
INVENTOR(S): Hepburn, Bonnie; Goldlust, Barry
PATENT ASSIGNEE(S): Santarus, Inc., USA
SOURCE: PCT Int. Appl., 121 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004073654	A2	20040902	WO 2004-US5170	20040220 <--
WO 2004073654	A3	20050113		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2517005	A1	20040902	CA 2004-2517005	20040220 <--
EP 1603537	A2	20051214	EP 2004-713382	20040220
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006518751	T	20060817	JP 2006-503768	20040220
MX 2005PA08804	A	20060525	MX 2005-PA8804	20050818
AU 2005204242	A1	20050929	AU 2005-204242	20050825

PRIORITY APPLN. INFO.:		
US 2003-448627P	P	20030220
AU 2004-213046	A3	20040220
WO 2004-US5170	W	20040220
US 2004-938766	A	20040910

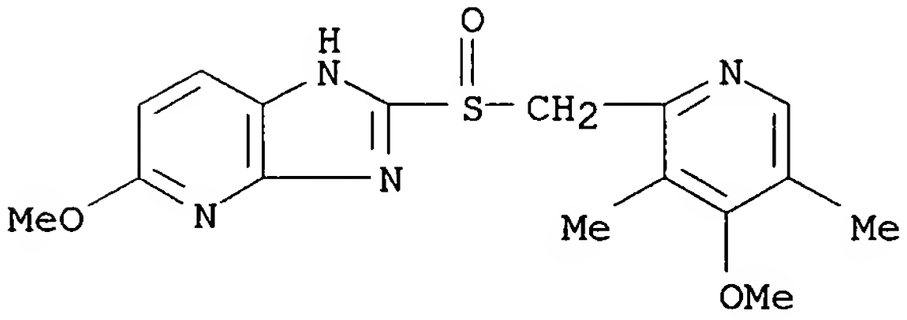
AB The present invention is directed to methods, kits, combinations, and compns. for treating, preventing or reducing the risk of developing a gastrointestinal disorder or disease, or the symptoms associated with, or related to a gastrointestinal disorder or disease in a subject in need thereof. In one aspect, the present invention provides a pharmaceutical

composition comprising a proton pump inhibiting agent and a buffering agent for oral administration and ingestion by a subject. Upon administration, the composition contacts the gastric fluid of the stomach and increases the gastric fluid pH of the stomach to a pH that substantially prevents or inhibits acid degradation of the proton pump inhibiting agent in the gastric fluid and allows a measurable serum concentration of the proton pump inhibiting agent to be absorbed into the blood serum of the subject. Omeprazole powder plus a chewable tablet of NaHCO3 and CaCO3 resulted in more rapid absorption in humans when compared to a marketed omeprazole delayed-release formulation.

IT 113712-98-4, Tenatoprazole
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(omeprazole antacid complex-immediate release for rapid and sustained suppression of gastric acid)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 12 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:609743 CAPLUS
DOCUMENT NUMBER: 141:145707
TITLE: Method for the administration of acid-labile drugs using basic salts with calcium, magnesium or aluminum
INVENTOR(S): Sharma, Virender K.; Howden, Colin W.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 8 pp., Cont.-in-part of U.S. Ser. No. 824,847.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE	
US 2004146554	A1	20040729	US 2004-755656		20040112	<--
US 2002146451	A1	20021010	US 2001-824847		20010404	<--
PRIORITY APPLN. INFO.:			US 2000-218509P	P	20000715	
			US 2001-824847	A2	20010404	

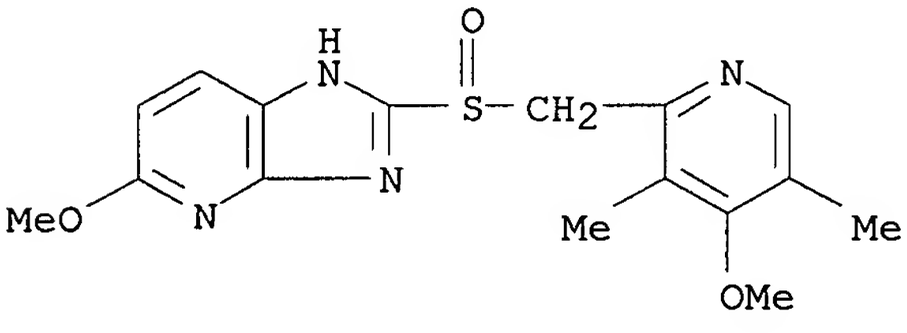
AB A method for the formulation and delivery for administration of acid-labile drugs to human beings and other animals achieved by mixing the active pharmaceutical compound with a basic salt as one of calcium, magnesium and aluminum in a solution or suspension of any kind, where the basic salt solution or suspension protects the pharmaceutical compound from the adverse effects of gastric acid by neutralizing gastric acid. When calcium is used, it has the advantage of no obvious contraindications and is generally usable by all patients, especially those patients who have diseases in which sodium is contraindicated.

IT 113712-98-4, Tenatoprazole 705968-86-1, (S)-Tenatoprazole
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);

THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as acid-labile drug; acid-labile drug formulations as basic salts with calcium, magnesium or aluminum)

RN 113712-98-4 CAPLUS

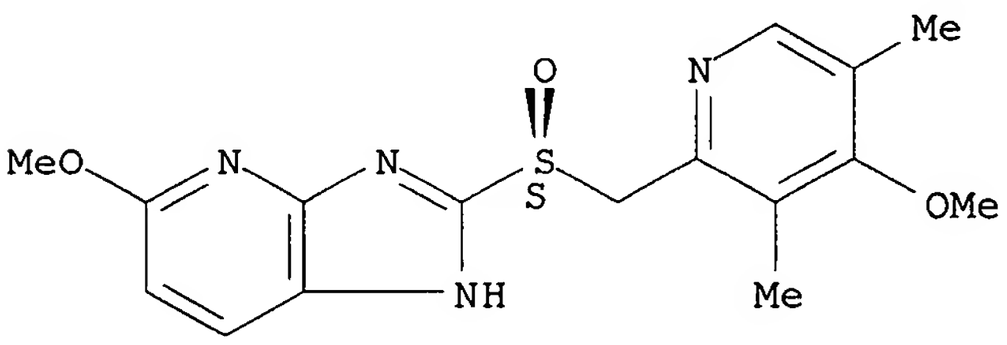
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



RN 705968-86-1 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L5 ANSWER 13 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:515505 CAPLUS

DOCUMENT NUMBER: 141:71546

TITLE: Process for preparing optically pure 2-(2-pyridylmethylsulfinyl)-1H-benzimidazole and 2-(2-pyridylmethylsulfinyl)-1H-imidazo[4,5-b]pyridine as proton pump inhibitors (PPI)

INVENTOR(S): Kohl, Bernhard; Mueller, Bernd; Weingart, Ralf Steffen

PATENT ASSIGNEE(S): Altana Pharma Ag, Germany

SOURCE: PCT Int. Appl., 20 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004052882	A1	20040624	WO 2003-EP13605	20031203 <--
W: AE, AL, AU, BA, BR, CA, CN, CO, DZ, EC, EG, GE, HR, ID, IL, IN, IS, JP, KR, LT, LV, MA, MK, MX, NO, NZ, PH, PL, SG, TN, UA, US, VN, YU, ZA, ZW				
RW: AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
CA 2507807	A1	20040624	CA 2003-2507807	20031203 <--
AU 2003289948	A1	20040630	AU 2003-289948	20031203 <--
EP 1578742	A1	20050928	EP 2003-782288	20031203
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

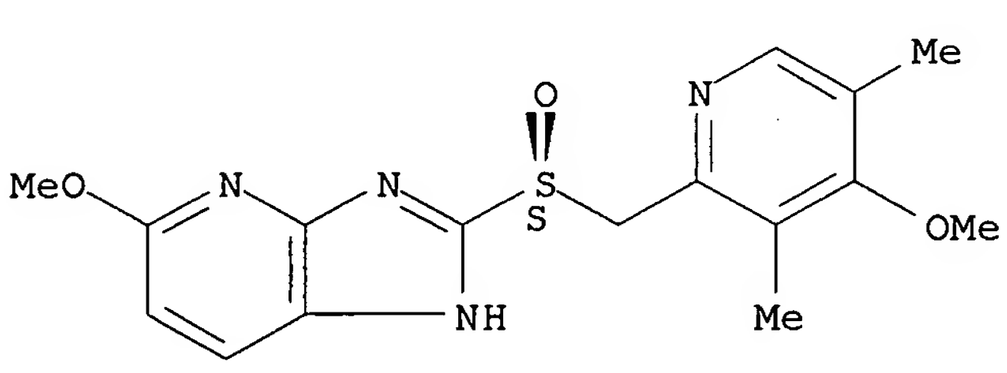
BR 2003017005	A	20051025	BR 2003-17005		20031203
CN 1717403	A	20060104	CN 2003-80104410		20031203
JP 2006516261	T	20060629	JP 2005-502310		20031203
ZA 2005003543	A	20060830	ZA 2005-3543		20050504
US 2005288334	A1	20051229	US 2005-536766		20050527
MX 2005PA05762	A	20050816	MX 2005-PA5762		20050530
NO 2005003099	A	20050624	NO 2005-3099		20050624
IN 2005MN00674	A	20051021	IN 2005-MN674		20050627
PRIORITY APPLN. INFO.:			EP 2002-27273	A	20021206
			DE 2003-10340255	A	20030829
			WO 2003-EP13605	W	20031203

AB Described is a process for preparing optically pure PPI having a sulfinyl structure in enantiomerically pure or enantiomerically enriched form by oxidation of the corresponding sulfides in the presence of a chiral zirconium or hafnium complex. Thus, 20.2 g 5-difluoromethoxy-2-[(3,4-dimethoxy-2-pyridinyl)methylthio]-1H-benzimidazole together with 17.9 g di-Et (+)-tartrate, 13.4 g zirconium(IV) isopropoxide/isopropanol complex and 0.1 mL H2O were suspended in 100 mL Me iso-Bu ketone and heated at 40° for one hour to give an almost clear solution After cooling to room temperature, 4.1 mL N-ethyldiisopropylamine was added, followed by slowly metering 11 mL cumene hydroperoxide, and the mixture was stirred at room temperature until the oxidation process to give, after workup, (-)-pantoprazole as a beige powder of m.p. 145° (decomposition) and an optical purity of >95%. After recrystn. from isopropanol, a clear crystal of m.p. 147-149° (decomposition) with an optical rotation of a D20 = -140° (c = 0.5, MeOH) was obtained.

IT 705968-86-1P, (S)-5-Methoxy-2-[(4-methoxy-3,5-dimethyl-2-pyridylmethyl)sulfinyl]-1H-imidazo[4,5-b]pyridine 705969-00-2P, (R)-5-Methoxy-2-[(4-methoxy-3,5-dimethyl-2-pyridylmethyl)sulfinyl]-1H-imidazo[4,5-b]pyridine
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparing optically pure 2-(2-pyridyolmethylsulfinyl)-1H-benzimidazole and -1H-imidazo[4,5-b]pyridine as proton pump inhibitors by oxidation of sulfides in the presence of a chiral zirconium or hafnium complex)

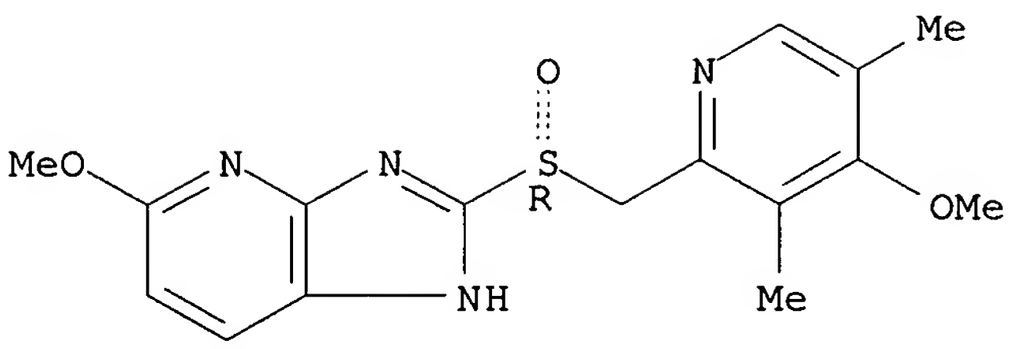
RN 705968-86-1 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 705969-00-2 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(R)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

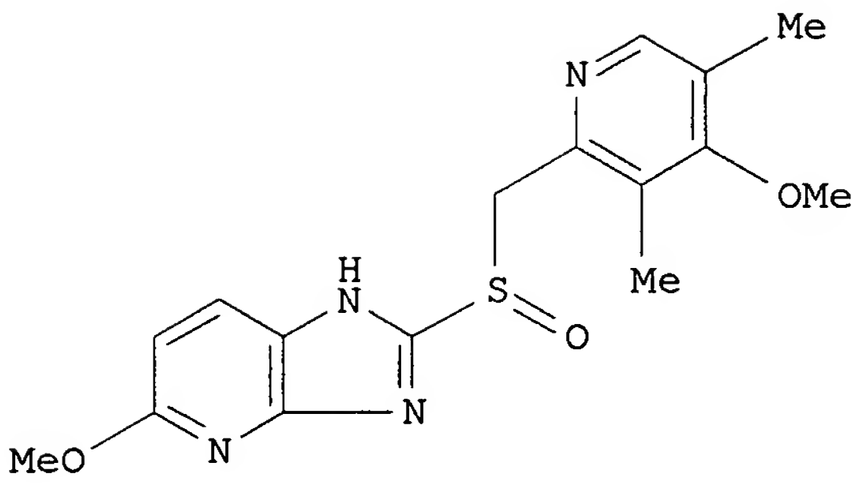


L5 ANSWER 14 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:492326 CAPLUS
DOCUMENT NUMBER: 141:54339
TITLE: Tenatoprazole enantiomer with improved pharmacokinetic behavior, and its therapeutic application in the treatment of digestive pathologies
INVENTOR(S): Schutze, Francois; Charbit, Suzy; Ficheux, Herve; Homerin, Michel; Taccoen, Alain; Cohen, Avraham
PATENT ASSIGNEE(S): Negma Gild, Fr.
SOURCE: Fr. Demande, 15 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2848555	A1	20040618	FR 2002-15949	20021216 <--
FR 2848555	B1	20060728		
CA 2509899	A1	20040722	CA 2003-2509899	20031216 <--
WO 2004060891	A1	20040722	WO 2003-FR3746	20031216 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003300627	A1	20040729	AU 2003-300627	20031216 <--
EP 1572692	A1	20050914	EP 2003-814481	20031216
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003017328	A	20051108	BR 2003-17328	20031216
CN 1726214	A	20060125	CN 2003-80106267	20031216
JP 2006513230	T	20060420	JP 2004-564280	20031216
US 2005119298	A1	20050602	US 2004-507485	20040913
US 7034038	B2	20060425		
IN 2005DN02472	A	20070105	IN 2005-DN2472	20050608
NO 2005002798	A	20050704	NO 2005-2798	20050609
MX 2005PA06419	A	20060308	MX 2005-PA6419	20050615
US 2006194832	A1	20060831	US 2006-344212	20060201

PRIORITY APPLN. INFO.:		
FR 2002-15949	A	20021216
WO 2003-FR3746	W	20031216
US 2004-507485	A3	20040913

GI



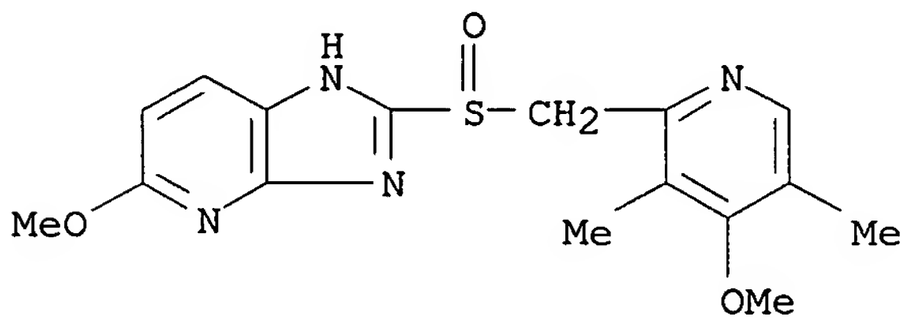
I

AB The invention relates to the (-)-enantiomer of tenatoprazole, i.e., (-)-I, or (-)-5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridyl)methyl]sulfinyl]imidazo[4,5-b]pyridine. This enantiomer has improved pharmacokinetic properties relative to racemic I, allowing a posol. of only one dose of drug per day in indicated usages. (-)-I is applicable to treatment of digestive pathologies. Claims cover (-)-I and salts, preparation of (-)-I by chiral chromatog. of the racemate, compns. containing (-)-I and salts, particularly the Na, K, Li, Mg, and Ca salts, and the use of these compds. for treatment of a variety of specific conditions, or for inhibition of acid secretion. For instance, separation of 2 g (±)-I on a 265+110 mm ChiralPak column containing an amylose tris[(S)-α-methylbenzylcarbamate] stationary phase at ambient temperature gave (-)-I. Pharmacokinetic studies in Caucasians show that a mutation of cytochrome 2C19 gives rise to fast and slow metabolizers of I, which leads to plasma accumulation of (+)-I in CYP2C19*2/*2-homozygous slow metabolizers, and a higher proportion of (-)-I in CYP2C19*1/*1-homozygous fast metabolizers. It appears that (+)-I is metabolized predominantly by CYP2C19, whereas (-)-I is metabolized by 2 routes, CYP2C19 and CYP3A4. Thus, therapy with (-)-I offers the advantages of reduced variability between patients, better utilization, longer mean residence time, and reduced potential for drug interaction by compensation for potential CYP2C19 blockage. (-)-I has a plasmatic half-life of 10-12 h at 20-80 mg doses, whereas (±)-I has a half-life of 7 h at 20 mg and 9 h at 80 mg.

IT 113712-98-4, (±)-Tenatoprazole
RL: PEP (Physical, engineering or chemical process); PKT (Pharmacokinetics); PYP (Physical process); BIOL (Biological study); PROC (Process)
(chromatog. resolution; preparation of tenatoprazole enantiomer with improved pharmacokinetic behavior, for treatment of digestive disorders)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



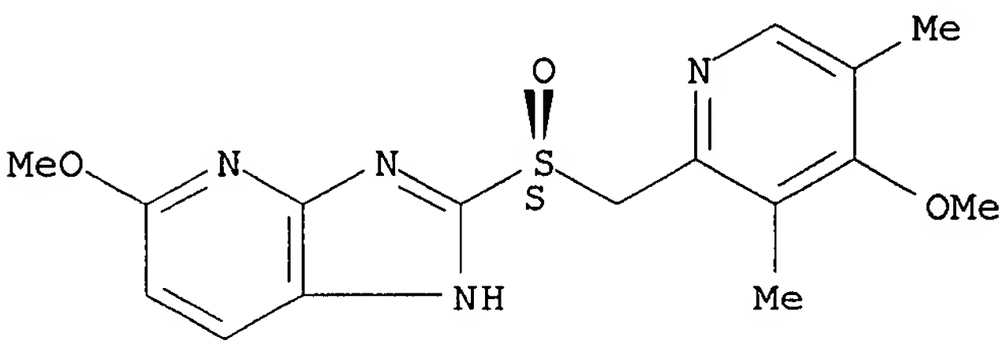
IT 705968-86-1P 705968-89-4P, (-)-Tenatoprazole sodium salt
705968-92-9P, (-)-Tenatoprazole potassium salt
705968-95-2P, (-)-Tenatoprazole lithium salt 705968-98-5P
, (-)-Tenatoprazole magnesium salt 705968-99-6P,
(-)-Tenatoprazole calcium salt
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); SPN (Synthetic

preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of tenatoprazole enantiomer with improved pharmacokinetic behavior, for treatment of digestive disorders)

RN 705968-86-1 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

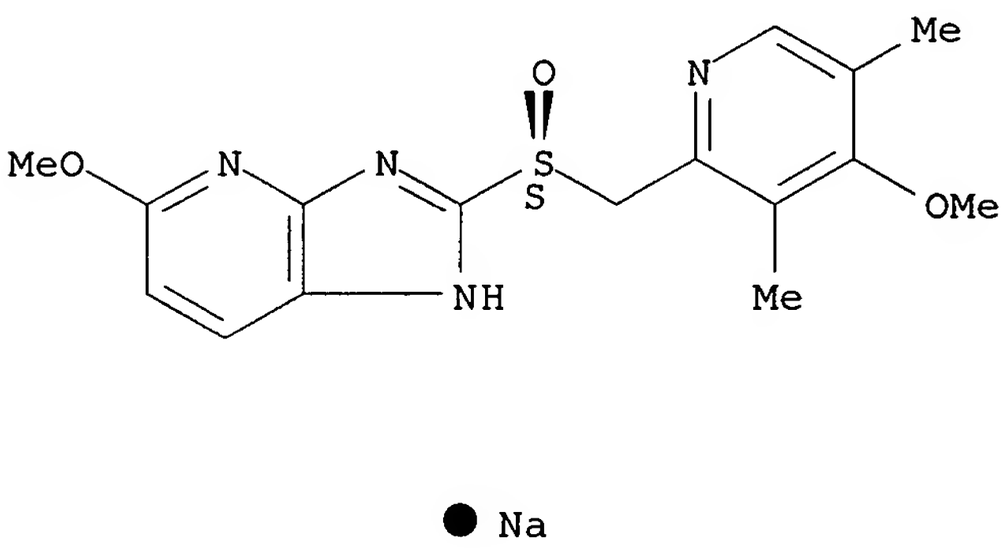
Absolute stereochemistry. Rotation (-).



RN 705968-89-4 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, sodium salt (9CI) (CA INDEX NAME)

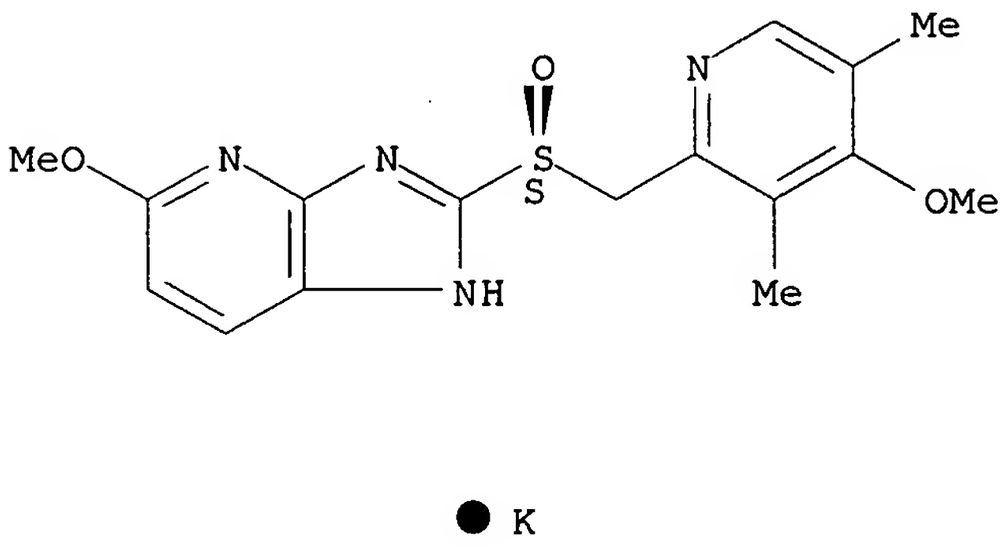
Absolute stereochemistry. Rotation (-).



RN 705968-92-9 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, potassium salt (9CI) (CA INDEX NAME)

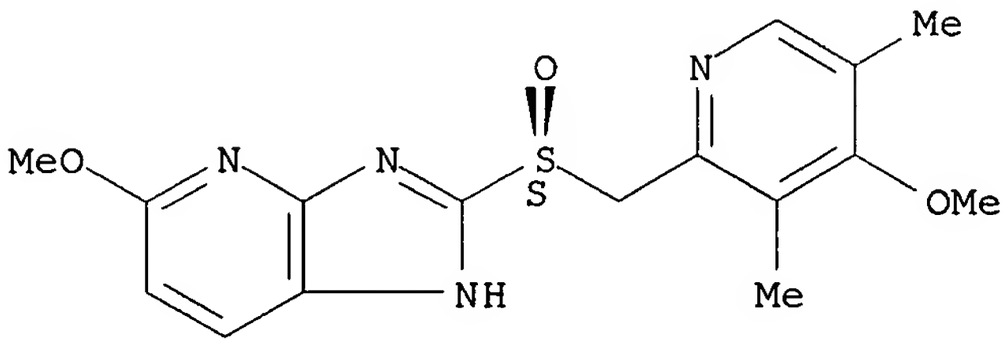
Absolute stereochemistry. Rotation (-).



RN 705968-95-2 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, lithium salt (9CI) (CA INDEX NAME)

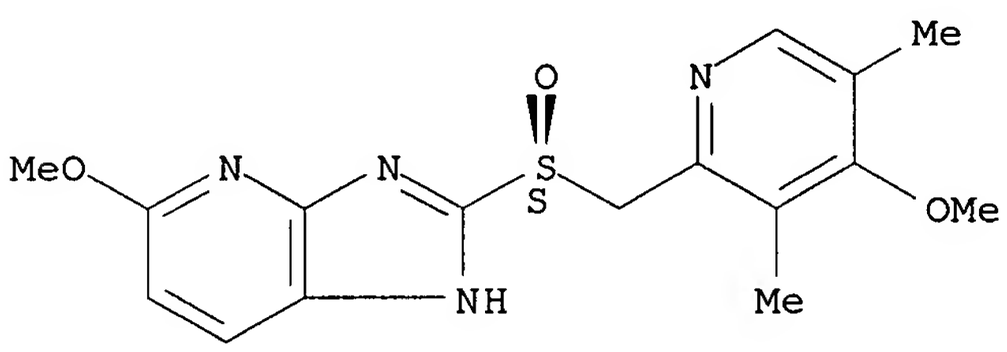
Absolute stereochemistry. Rotation (-).



● Li

RN 705968-98-5 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, magnesium salt (9CI) (CA INDEX NAME)

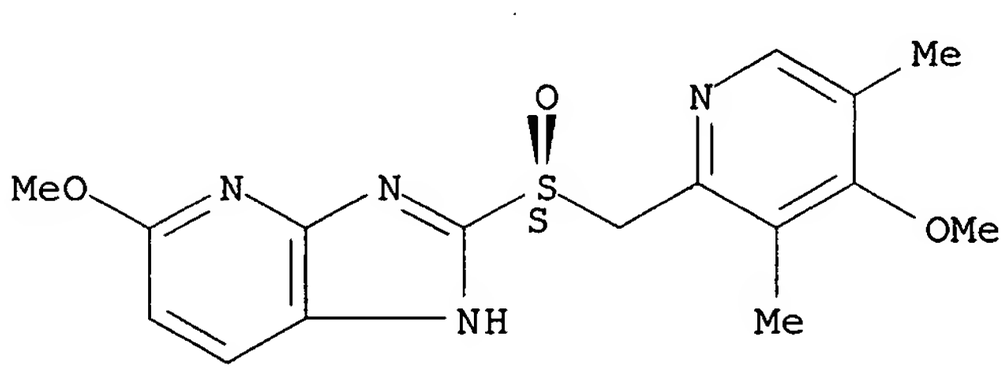
Absolute stereochemistry. Rotation (-).



●1/2 Mg

RN 705968-99-6 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, calcium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

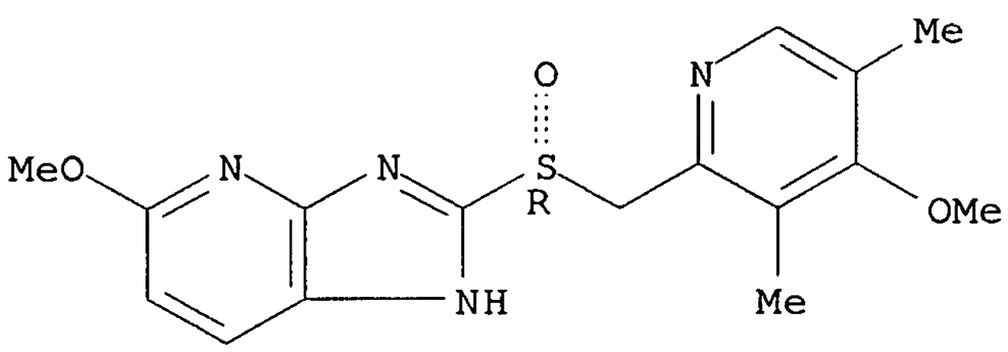


●1/2 Ca

IT 705969-00-2
RL: PKT (Pharmacokinetics); BIOL (Biological study)
(preparation of tenatoprazole enantiomer with improved pharmacokinetic behavior, for treatment of digestive disorders)
RN 705969-00-2 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[(R)-[(4-methoxy-3,5-dimethyl-2-

pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



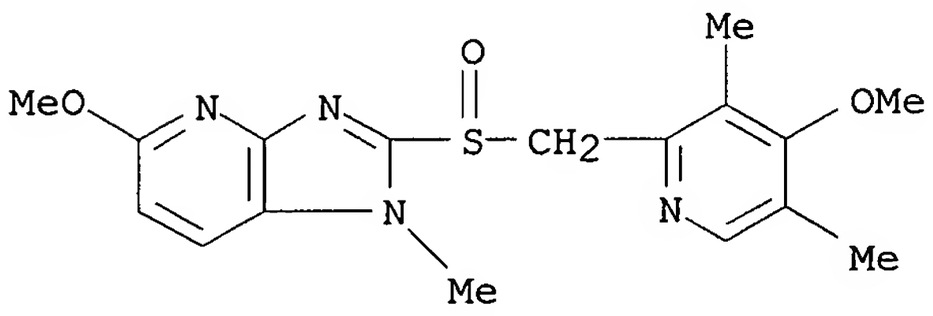
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 15 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:453656 CAPLUS
DOCUMENT NUMBER: 141:116452
TITLE: Chemistry of Covalent Inhibition of the Gastric (H+, K+)-ATPase by Proton Pump Inhibitors
AUTHOR(S): Shin, Jai Moo; Cho, Young Moon; Sachs, George
CORPORATE SOURCE: Department of Physiology and Medicine, University of California, Los Angeles, CA, 90073, USA
SOURCE: Journal of the American Chemical Society (2004), 126(25), 7800-7811
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:116452

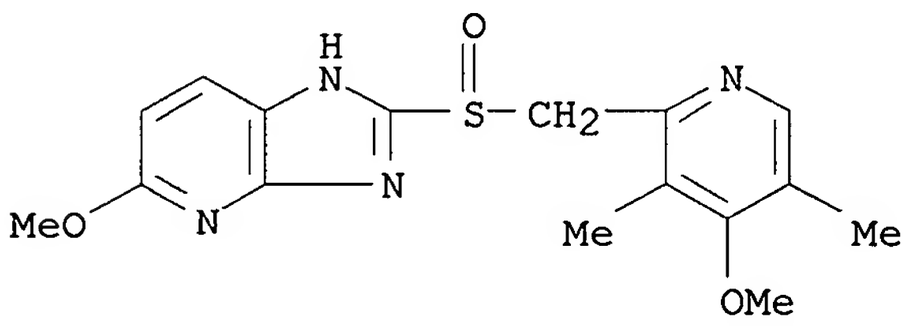
AB Proton pump inhibitors (PPIs), drugs that are widely used for treatment of acid related diseases, are either substituted pyridylmethylsulfinyl benzimidazole or imidazopyridine derivs. They are all prodrugs that inhibit the acid-secreting gastric (H+, K+)-ATPase by acid activation to reactive thiophiles that form disulfide bonds with one or more cysteines accessible from the exoplasmic surface of the enzyme. This unique acid-catalysis mechanism had been ascribed to the nucleophilicity of the pyridine ring. However, the data obtained here show that their conversion to the reactive cationic thiophilic sulfenic acid or sulfenamide depends mainly not on pyridine protonation but on a second protonation of the imidazole component that increases the electrophilicity of the C-2 position on the imidazole. This protonation results in reaction of the C-2 with the unprotonated fraction of the pyridine ring to form the reactive derivs. The relevant PPI pKa's were determined by UV spectroscopy of the benzimidazole or imidazopyridine sulfinylmethyl moieties at different medium pH. Synthesis of a relatively acid stable analog, N1-Me lansoprazole, allowed direct determination of both pKa values of this intact PPI allowing calcn. of the two pKa values for all the PPIs. These values predict their relative acid stability and thus the rate of reaction with cysteines of the active proton pump at the pH of the secreting parietal cell. The PPI accumulates in the secretory canaliculus of the parietal cell due to pyridine protonation then binds to the pump and is activated by the second protonation on the surface of the protein to allow disulfide formation.

IT 721924-07-8P
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(chemical of covalent inhibition of gastric (H+, K+)-ATPase by proton pump inhibitors)

RN 721924-07-8 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-1-methyl- (9CI) (CA INDEX NAME)



IT 113712-98-4P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(chemical of covalent inhibition of gastric (H+, K+)-ATPase by proton pump inhibitors)
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

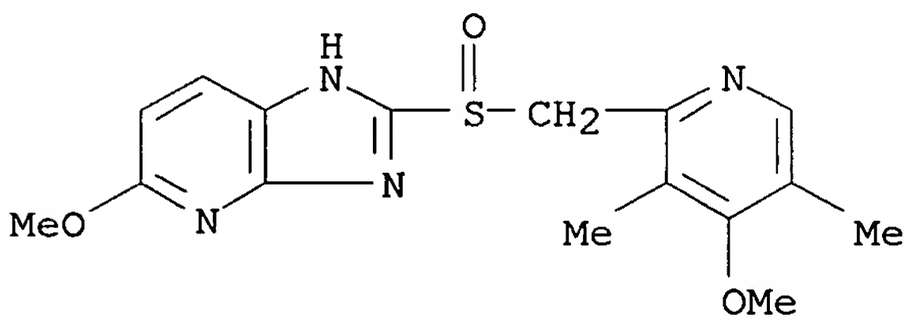
L5 ANSWER 16 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:378286 CAPLUS
DOCUMENT NUMBER: 141:360444
TITLE: Tenatoprazole, a novel proton pump inhibitor with a prolonged plasma half-life: effects on intragastric pH and comparison with esomeprazole in healthy volunteers
AUTHOR(S): Galmiche, J. P.; des Varannes, S. Bruley; Ducrotte, P.; Sacher-Huvelin, S.; Vavasseur, F.; Taccoen, A.; Fiorentini, P.; Homerin, M.
CORPORATE SOURCE: CIC-INSERM, CHU de Nantes, Nantes, Fr.
SOURCE: Alimentary Pharmacology and Therapeutics (2004), 19(6), 655-662
CODEN: APTHEN; ISSN: 0269-2813
PUBLISHER: Blackwell Publishing Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Background: Proton pump inhibitors control gastric acidity better during the day than at night, when nocturnal acid breakthrough can occur. Tenatoprazole is a novel proton pump inhibitor with a seven-fold longer plasma half-life. Aim: To compare the effects of tenatoprazole 20 mg (T20), tenatoprazole 40 mg (T40) and esomeprazole 40 mg (E40) on intragastric acidity in healthy volunteers. Methods: This randomized, three-period, cross-over study enrolled 18 Helicobacter pylori-neg. volunteers, who received E40, T20 and T40 once daily for 7 days with a 14-day washout between periods. Twenty-four-hour gastric pH monitoring was performed on day 7. Serum gastrin was assessed on day 8. Results: T40 induced a more potent acid inhibition than T20 (24-h median pH: 4.6

vs. 4.0, P < 0.01; daytime: 4.5 vs. 3.9, P < 0.01; night-time: 4.7 vs. 4.1, P < 0.05). T40 was more potent than E40 (24-h median pH: 4.6 vs. 4.2, P < 0.05; night-time: 4.7 vs. 3.6, P < 0.01); the pH > 4 holding time was higher during the night for T40 than for E40: 64.3% vs. 46.8%, P < 0.01; the nocturnal acid breakthrough duration was significantly shorter for T40 than for E40. No significant gastrin increase was observed and all drugs were well tolerated. Conclusion: T40 is significantly more potent than T20 and E40 during the night. The therapeutic relevance of this pharmacol. advantage deserves further study.

IT 113712-98-4, Tenatoprazole
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tenatoprazole with prolonged plasma half-life and esomeprazole were well tolerated, highly effective in controlling intragastric pH with no significant gastrin increase, but T40 was more potent than T20, E40 during night in healthy human)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

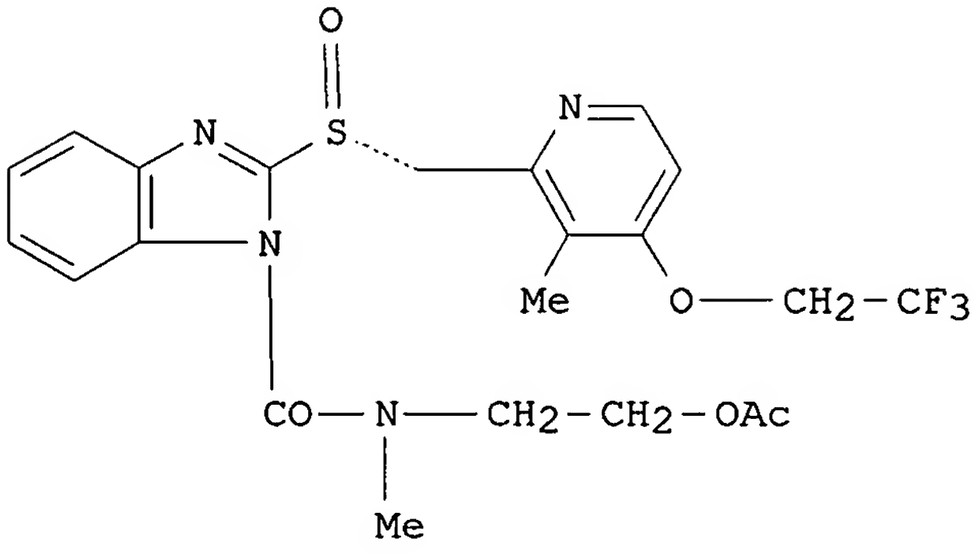
L5 ANSWER 17 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:354765 CAPLUS
DOCUMENT NUMBER: 140:380603
TITLE: Controlled release preparation containing proton pump inhibitors
INVENTOR(S): Akiyama, Yohko; Kurasawa, Takashi; Bando, Hiroto; Nagahara, Naoki
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 371 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004035020	A2	20040429	WO 2003-JP13155	20031015 <--
WO 2004035020	A3	20040624		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2499574	A1	20040429	CA 2003-2499574	20031015 <--

AU 2003272098	A1	20040504	AU 2003-272098		20031015 <--
JP 2004292427	A	20041021	JP 2003-354900		20031015 <--
EP 1553929	A2	20050720	EP 2003-754116		20031015
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
BR 2003015142	A	20050809	BR 2003-15142		20031015
CN 1713897	A	20051228	CN 2003-80103935		20031015
NZ 552592	A	20070629	NZ 1992-5525		20031015
IN 2005KN00604	A	20060616	IN 2005-KN604		20050408
US 2006013868	A1	20060119	US 2005-531069		20050411
MX 2005PA03902	A	20050622	MX 2005-PA3902		20050412
NO 2005002400	A	20050513	NO 2005-2400		20050513
PRIORITY APPLN. INFO.:			JP 2002-301876	A	20021016
			JP 2003-66336	A	20030312
			WO 2003-JP13155	W	20031015

OTHER SOURCE(S): MARPAT 140:380603
GI



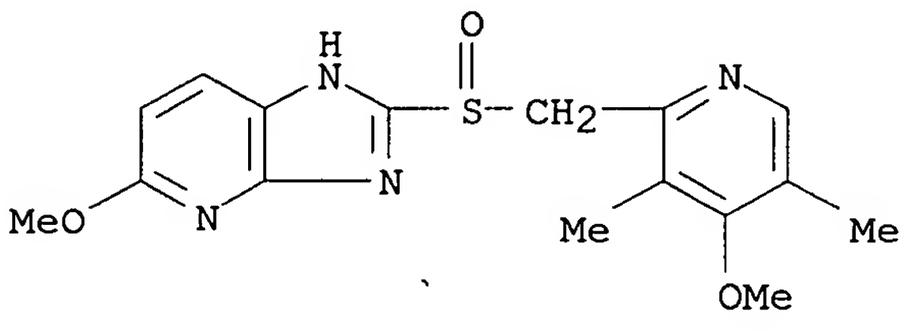
I

AB A controlled release preparation wherein the release of active ingredient is controlled, which releases an active ingredient for an extended period of time by staying or slowly migrating in the gastrointestinal tract, is provided by means such as capsulating a tablet, granule or fine granule wherein the release of active ingredient is controlled and a gel-forming polymer. Said tablet, granule or fine granule has a release-controlled coating-layer formed on a core particle containing an active ingredient. Many compds. such as I were prepared and formulations given, e.g., granules containing sucrose-starch spheres, R-lansoprazole, Mg·carbonate, purified sucrose, corn starch, low-substituted hydroxypropyl cellulose, and hydroxpropyl cellulose.

IT 113712-98-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(controlled release preparation containing proton pump inhibitors)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



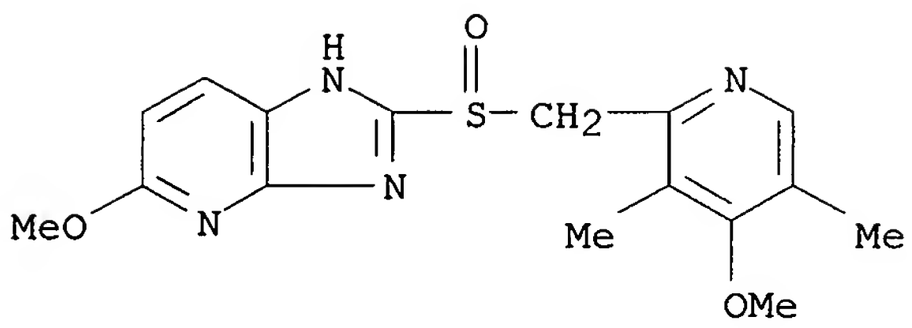
L5 ANSWER 18 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:329905 CAPLUS
DOCUMENT NUMBER: 140:344896
TITLE: Pharmaceutical composition comprising tenatoprazole and an anti-inflammatory drug
INVENTOR(S): Schutze, Francois; Charbit, Suzy; Ficheux, Herve; Homerin, Michel; Taccoen, Alain; Inaba, Yoshio
PATENT ASSIGNEE(S): Negma Gild, Fr.; Mitsubishi Pharma Corporation
SOURCE: Fr. Demande, 15 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2845917	A1	20040423	FR 2002-13115	20021021 <--
FR 2845917	B1	20060707		
CA 2503211	A1	20040506	CA 2003-2503211	20031021 <--
WO 2004037254	A1	20040506	WO 2003-FR3120	20031021 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003285424	A1	20040513	AU 2003-285424	20031021 <--
EP 1553942	A1	20050720	EP 2003-778425	20031021
EP 1553942	B1	20060524		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003015455	A	20050823	BR 2003-15455	20031021
JP 2006506376	T	20060223	JP 2004-546112	20031021
CN 1744897	A	20060308	CN 2003-80107201	20031021
AT 326968	T	20060615	AT 2003-778425	20031021
PT 1553942	T	20061031	PT 2003-778425	20031021
US 2006287284	A1	20061221	US 2006-532041	20060623

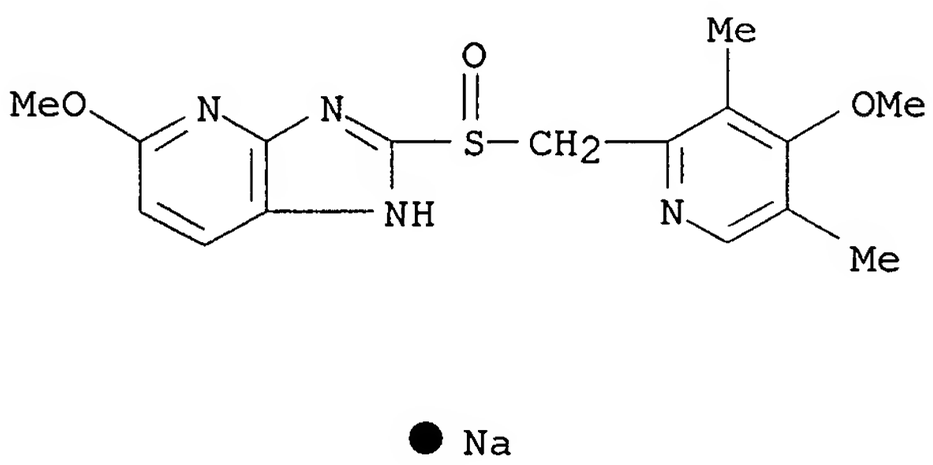
PRIORITY APPLN. INFO.:

FR 2002-13115	A	20021021
WO 2003-FR3120	W	20031021

AB A pharmaceutical composition comprises a combination of tenatoprazole and one or more NSAID and the inhibitors of cyclooxygenase-2 inhibitors for the treatment of the painful and inflammatory symptoms. A tablet contained tenatoprazole 20, diclofenac 100, and excipients q.s. 300 mg. Efficacy of the tablet in the treatment of patients with inflammation and pain is shown.
IT 113712-98-4, Tenatoprazole 335299-59-7
335299-60-0 884304-68-1 884304-69-2
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical composition comprising tenatoprazole and anti-inflammatory drugs)
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)

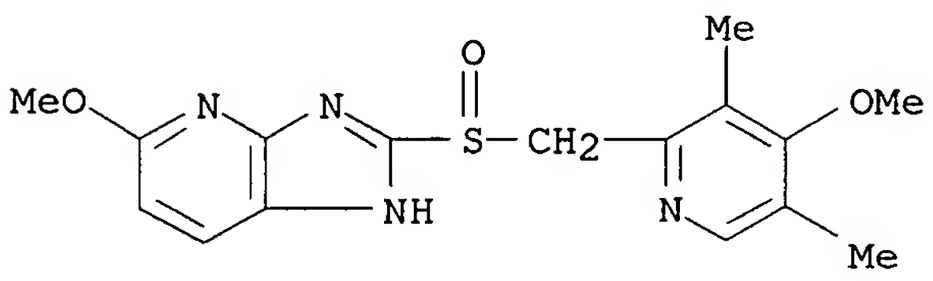


RN 335299-59-7 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, sodium salt (9CI) (CA INDEX NAME)



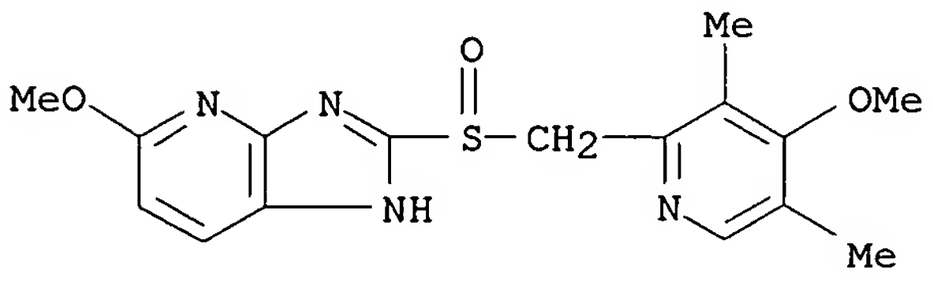
● Na

RN 335299-60-0 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, potassium salt (9CI) (CA INDEX NAME)



● K

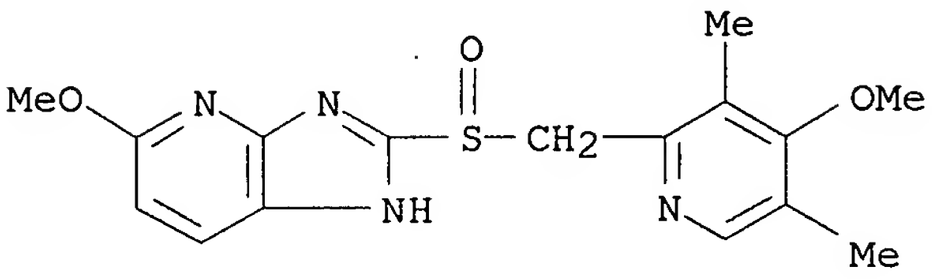
RN 884304-68-1 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, magnesium salt (2:1) (CA INDEX NAME)



●1/2 Mg

RN 884304-69-2 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-

pyridinyl)methyl]sulfinyl]-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 19 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:329904 CAPLUS
DOCUMENT NUMBER: 140:344895
TITLE: Pharmaceutical composition comprising tenatoprazole and an H2histamine receptor antagonist
INVENTOR(S): Schutze, Francois; Charbit, Suzy; Ficheux, Herve; Homerin, Michel; Taccoen, Alain; Inaba, Yoshio
PATENT ASSIGNEE(S): Negma Gild, Fr.; Mitsubishi Pharma Corporation
SOURCE: Fr. Demande, 13 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2845916	A1	20040423	FR 2002-13114	20021021 <--
FR 2845916	B1	20060707		
CA 2503215	A1	20040506	CA 2003-2503215	20031021 <--
WO 2004037256	A1	20040506	WO 2003-FR3124	20031021 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003285428	A1	20040513	AU 2003-285428	20031021 <--
EP 1553944	A1	20050720	EP 2003-778429	20031021
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003015445	A	20050816	BR 2003-15445	20031021
JP 2006506377	T	20060223	JP 2004-546116	20031021
CN 1744896	A	20060308	CN 2003-80107200	20031021
US 2006241136	A1	20061026	US 2005-532114	20050421

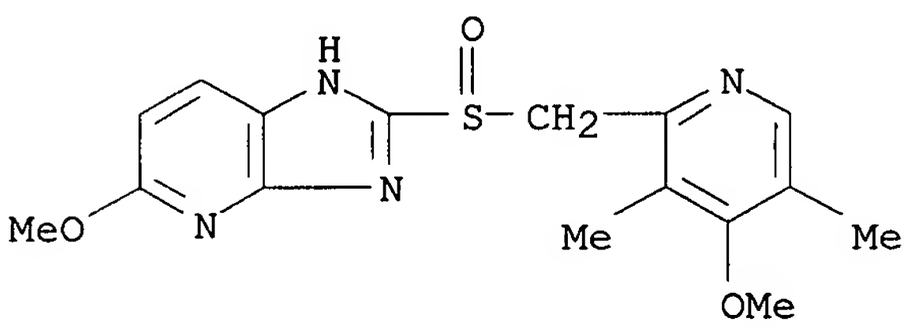
PRIORITY APPLN. INFO.:	FR 2002-13114	A	20021021
	WO 2003-FR3124	W	20031021

AB A new pharmaceutical composition for the treatment of gastric hyperacidity comprises tenatoprazole and one or more antagonists of H2-histamine receptors such as cimetidine, ranitidine, famotidine, and nizatidine. The composition is used for the treatment of the gastric and duodenal ulcers, and

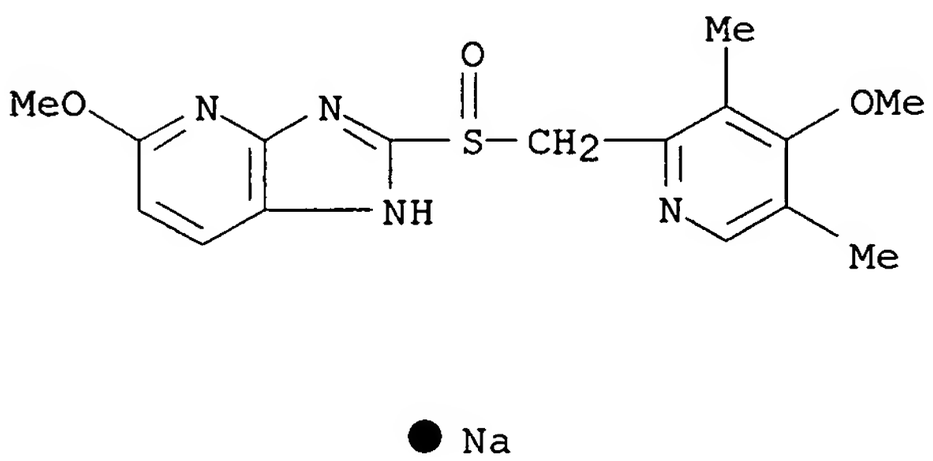
the symptoms and lesions of the gastro-esophagus reflux. A tablet contained tenatoprazole 20, ranitidine 200, and excipients q.s. 300 mg. Efficacy of the tablet in the treatment of patients with gastro-esophagus reflux is shown.

IT 113712-98-4, Tenatoprazole 335299-59-7
335299-60-0 884304-68-1 884304-69-2
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical composition comprising tenatoprazole and H2-histamine receptor antagonist)

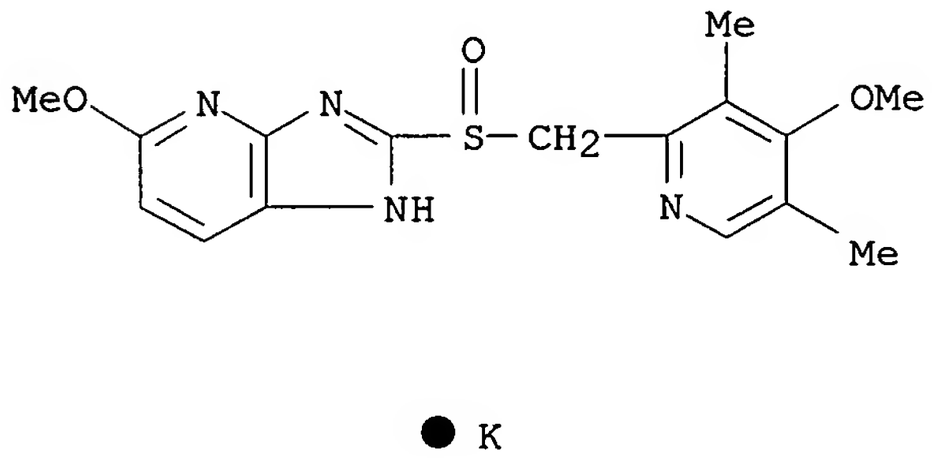
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



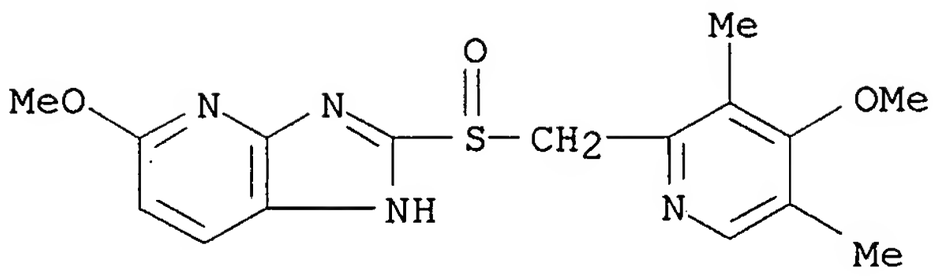
RN 335299-59-7 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, sodium salt (9CI) (CA INDEX NAME)



RN 335299-60-0 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, potassium salt (9CI) (CA INDEX NAME)

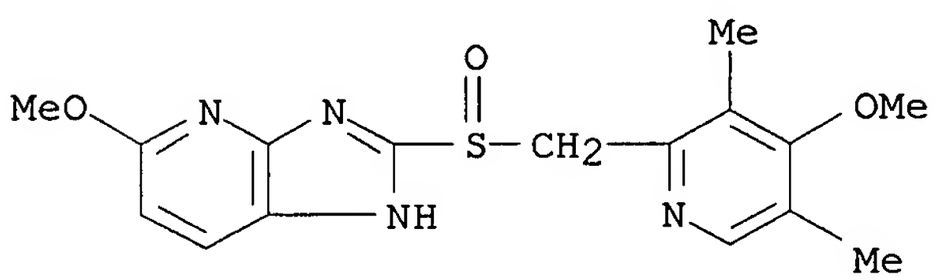


RN 884304-68-1 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, magnesium salt (2:1) (CA INDEX NAME)



●1/2 Mg

RN 884304-69-2 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, calcium salt (9CI) (CA INDEX NAME)



●1/2 Ca

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 20 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:329903 CAPLUS
DOCUMENT NUMBER: 140:315073
TITLE: Use of tenatoprazole for the treatment of the gastroesophageal reflux
INVENTOR(S): Schutze, Francois; Charbit, Suzy; Ficheux, Herve; Homerin, Michel; Taccoen, Alain; Inaba, Yoshio
PATENT ASSIGNEE(S): Negma Gild, Fr.; Mitsubishi Pharma Corporation
SOURCE: Fr. Demande, 21 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2845915	A1	20040423	FR 2002-13113	20021021 <--
FR 2845915	B1	20060623		
CA 2503212	A1	20040506	CA 2003-2503212	20031021 <--
WO 2004037255	A1	20040506	WO 2003-FR3122	20031021 <--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

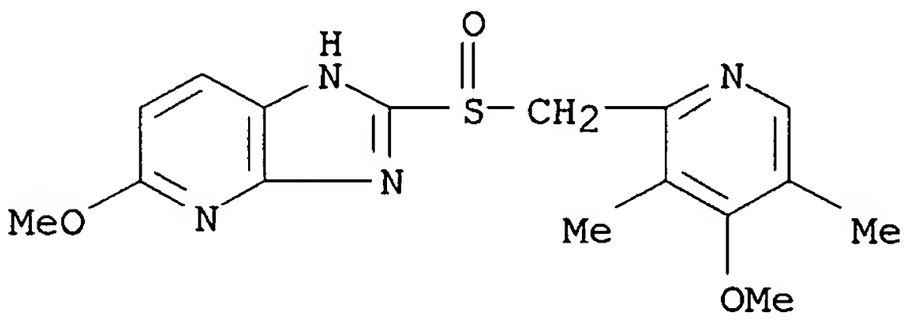
AU 2003285426	A1	20040513	AU 2003-285426		20031021 <--
EP 1553943	A1	20050720	EP 2003-778427		20031021
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
BR 2003015458	A	20050823	BR 2003-15458		20031021
JP 2006508083	T	20060309	JP 2004-546114		20031021
CN 1753674	A	20060329	CN 2003-80107199		20031021
US 2007066659	A1	20070322	US 2006-531900		20060623
PRIORITY APPLN. INFO.:			FR 2002-13113	A	20021021
			WO 2003-FR3122	W	20031021

AB The invention relates to a new therapeutic indication of tenatoprazole. Tenatoprazole, like its salts, can be used in the manufacture of a drug for the treatment of the atypical symptoms of gastroesophageal reflux, Gastrointestinal bleedings, and dyspepsias.

IT 113712-98-4, Tenatoprazole
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(use of tenatoprazole for treatment of gastroesophageal reflux)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 21 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:100820 CAPLUS

DOCUMENT NUMBER: 140:163865

TITLE: Preparation of nitrosated (pyridylmethylsulfinyl)benzimidazolecarboxylate derivatives as proton pump inhibitors

INVENTOR(S): Fang, Xinqin; Garvey, David S.; Letts, L. Gordon

PATENT ASSIGNEE(S): Nitromed, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 47 pp.
CODEN: USXXCO

DOCUMENT TYPE: Patent

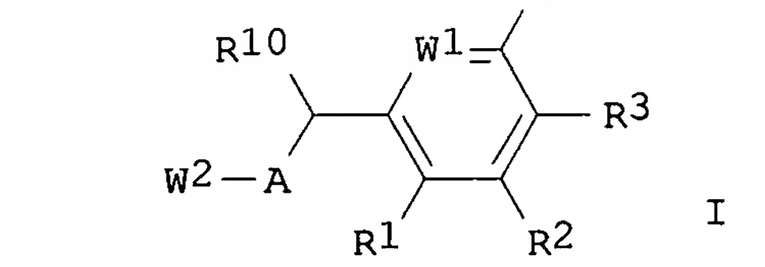
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

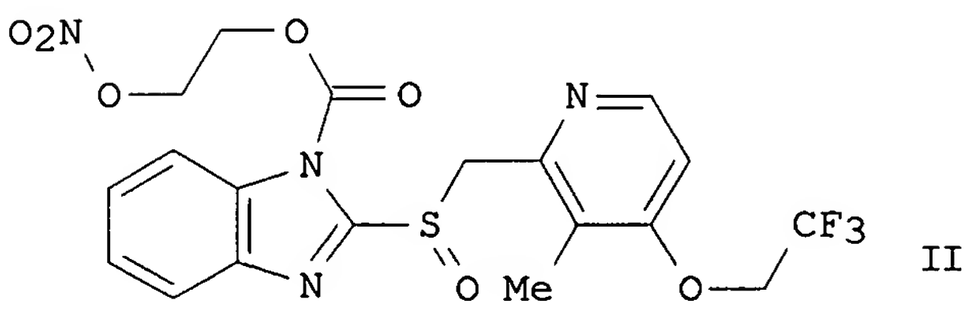
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004024014	A1	20040205	US 2003-631782	20030801 <--
US 7211590	B2	20070501		
CA 2493618	A1	20040212	CA 2003-2493618	20030801 <--
WO 2004012659	A2	20040212	WO 2003-US23963	20030801 <--
WO 2004012659	A3	20041007		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
AU 2003254282 A1 20040223 AU 2003-254282 20030801 <--
EP 1534278 A2 20050601 EP 2003-767016 20030801
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
JP 2005539013 T 20051222 JP 2004-526261 20030801
US 2007179150 A1 20070802 US 2007-689568 20070322
PRIORITY APPLN. INFO.: US 2002-399715P P 20020801
US 2003-631782 A3 20030801
WO 2003-US23963 W 20030801
OTHER SOURCE(S): MARPAT 140:163865
GI



I



II

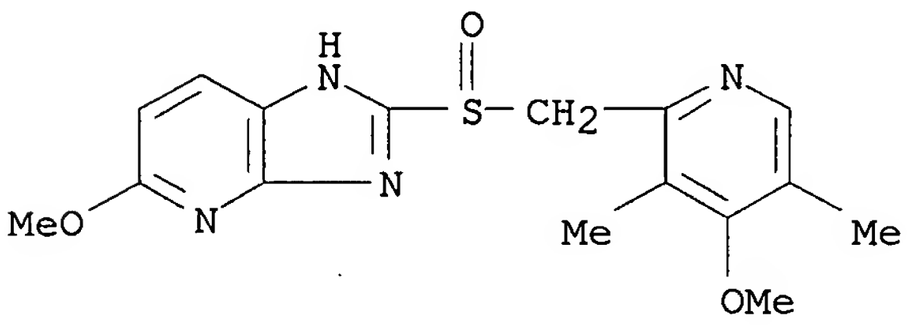
AB Title compds. I (12 addnl. Markush structures), [wherein R1 = H, alkoxy, alkyl, alkylthio; R2 = H, halogen, (halo)alkoxy, (alkoxy)alkyl, alkylthio, amino, or R2 and R3 taken together with the carbon atoms to which they are attached form a cycloalkyl ring, aryl, or heterocyclic ring; R3, R11 = independently H, alkoxy, alkyl, alkylthio, or R3 and R11 taken together with the carbon chain to which they are attached form cycloalkyl ring, aryl, or heterocyclic ring; R10 = H or R10 and R1 taken together with the carbon chain to which they are attached form cycloalkyl ring; A = SOn, n = 0-2; W1 = CH, N, amino-substituted carbon; W2 = (un)substituted (aza)benzimidazole, 1-phenylimidazolyl, 1-(2-pyridinyl)imidazolyl, thieno[3,4-d]imidazolyl; and pharmaceutically acceptable salts thereof], were prepared as proton pump inhibitors. For example, reaction of lansoprazole with 2-(nitrooxy)ethyl chloroformate in the presence of NaH in THF at 0 °C gave II in 62%. Thus, I and their pharmaceutical compns. are useful as proton pump inhibitors, that donate, transfer or release nitric oxide, stimulate endogenous synthesis of nitric oxide, elevate endogenous levels of endothelium-derived relaxing factor or are the substrate for nitric oxide synthase. The invention also also provide for novel kits comprising at least one nitrosated proton pump inhibitor compound, and, optionally, at least one nitric oxide donor and/or at least one therapeutic agent. Furthermore, I and their pharmaceutical compns. are also useful for the treatment of gastrointestinal disorders; facilitating ulcer healing; decreasing the recurrence of ulcers; improving gastroprotective properties, anti-Helicobacter pylori properties or antacid properties of proton pump inhibitors; decreasing or reducing the gastrointestinal toxicity associated with the use of nonsteroidal

antiinflammatory compds.; and treating bacterial infections and/or viral infections (no data).

IT 113712-98-4DP, Tenatoprazole, nitrosated derivs.
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of nitrosated (pyridylmethylsulfinyl)benzimidazolecarboxylate derivs. as proton pump inhibitors)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



REFERENCE COUNT: 109 THERE ARE 109 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 22 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:1006959 CAPLUS
DOCUMENT NUMBER: 140:42180
TITLE: Preparation of nitrogenous heterocycle prodrugs having N-(2-acyloxyethyl)-N-methylcarbamoyl groups
INVENTOR(S): Kamiyama, Keiji; Banno, Hiroshi; Sato, Fumihiko; Hasuoka, Atsushi
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 75 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

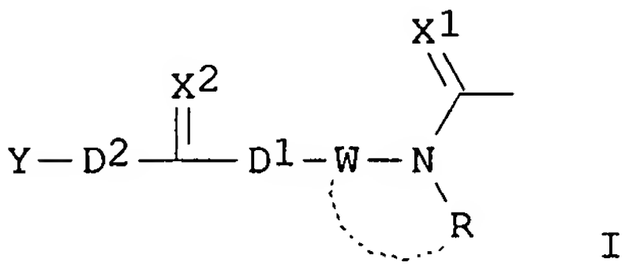
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003106429	A1	20031224	WO 2003-JP7545	20030613 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2489470	A1	20031224	CA 2003-2489470	20030613 <--
AU 2003242388	A1	20031231	AU 2003-242388	20030613 <--
JP 2004307457	A	20041104	JP 2003-169308	20030613 <--
EP 1514870	A1	20050316	EP 2003-733425	20030613
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1678315	A	20051005	CN 2003-818895	20030613
ZA 2005000090	A	20060726	ZA 2005-90	20050105
US 2006293371	A1	20061228	US 2005-517847	20050624

PRIORITY APPLN. INFO.:

JP 2002-175086	A	20020614
JP 2003-41085	A	20030219
WO 2003-JP7545	W	20030613

OTHER SOURCE(S): MARPAT 140:42180

GI



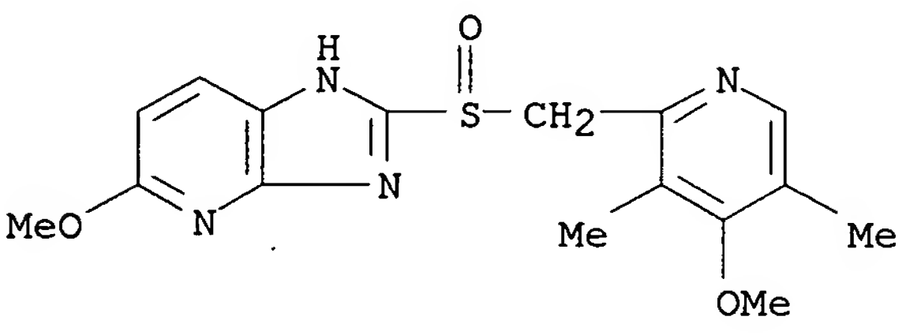
I

AB Disclosed is a compound having a group represented by the formula (I) [X1, X2 = O, S; W = (un)substituted bivalent hydrocarbon chain, -W1-Z-W2-; wherein W1, W2 = bivalent hydrocarbon chain, a bond; Z = (un)substituted bivalent hydrocarbon ring or heterocyclic ring, O, S, SO, SO2, (un)substituted NH; provided that when Z = O, S, SO, SO2, or (un)substituted NH, then W1, W2 = bivalent hydrocarbon chain; R = H, (un)substituted hydrocarbon group or heterocyclic ring; or R is not H, R may be linked to W; D1, D2 = a bond, O, S, (un)substituted NH; Y = (un)substituted hydrocarbyl or heterocyclyl] as a modifying group to be eliminated from a prodrug. It enables prodrug development based on the modification of a nitrogenous heterocycle, etc., with N-(2-acyloxyethyl)-N-methylcarbamoyl groups. For example, 3'-azido-3'-deoxythymidine (zidovudine), N-cyano-N'-methyl-N''-[2-((4-methyl-5-imidazolyl)-methylthio)ethyl]guanidine (cimetidine), (R)-2-[[[3-methyl-4-(2,2,2-trifluoroethoxy)-2-pyridyl]methyl]sulfinyl]-1H-benzimidazole [(R)-(+)-lansoprazole], 2-[[(3,5-Dimethyl-4-methoxy-2-pyridyl)methyl]sulfinyl]-5-methoxy-1H-benzimidazole (omeprazole), 2-[[[4-(3-methoxypropoxy)-3-methyl-2-pyridyl]methyl]sulfinyl]benzimidazole (rabeprazole), 5-(difluoromethoxy)-2-[[(3,4-dimethoxy-2-pyridyl)methyl]sulfinyl]-1H-benzimidazole (pantoprazole), or 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-1H-Imidazo[4,5-b]pyridine (tenatoprazole) were modified by one of CONMeCH2CH2OCO2Et, CONMeCH2CH2OAc, and CONMeCH2CH2OCO2-(tetrahydropyranyl-4-yl) groups.

IT 113712-98-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of nitrogenous heterocycle prodrugs having N-(acyloxyethyl)-N-methylcarbamoyl groups)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

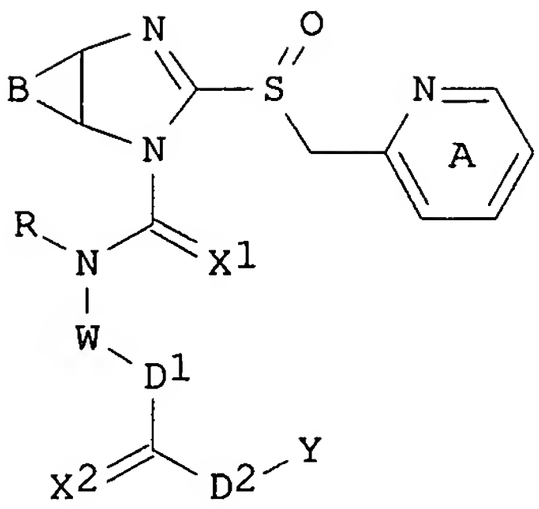
L5 ANSWER 23 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:1006770 CAPLUS
DOCUMENT NUMBER: 140:42178
TITLE: Preparation of prodrugs of benzimidazoles and analogs as proton pump inhibitors for the treatment of peptic ulcers
INVENTOR(S): Kamiyama, Keiji; Banno, Hiroshi; Sato, Fumihiko
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 216 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003105845	A1	20031224	WO 2003-JP7546	20030613 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2489361	A1	20031224	CA 2003-2489361	20030613 <--
AU 2003242390	A1	20031231	AU 2003-242390	20030613 <--
JP 2004307457	A	20041104	JP 2003-169308	20030613 <--
EP 1513527	A1	20050316	EP 2003-733426	20030613
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003011801	A	20050412	BR 2003-11801	20030613
CN 1678315	A	20051005	CN 2003-818895	20030613
MX 2004PA12396	A	20050617	MX 2004-PA12396	20041209
US 2005222210	A1	20051006	US 2004-517633	20041213
IN 2005KN00033	A	20060526	IN 2005-KN33	20050103
ZA 2005000090	A	20060726	ZA 2005-90	20050105
NO 2005000141	A	20050127	NO 2005-141	20050111

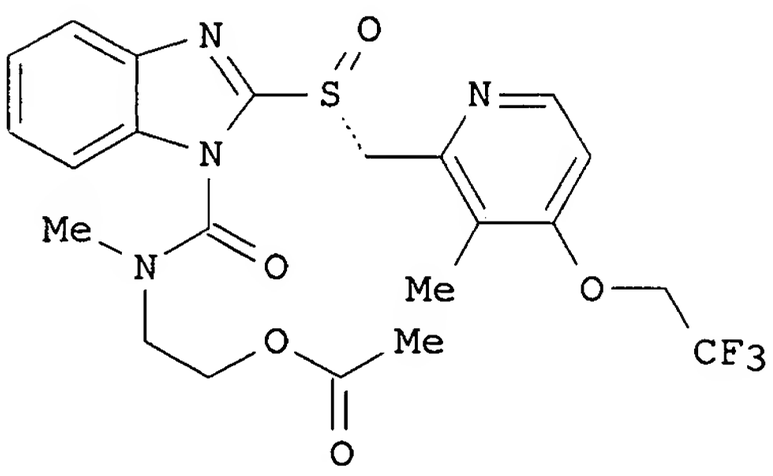
PRIORITY APPLN. INFO.:
JP 2002-175086 A 20020614
JP 2003-41085 A 20030219
WO 2003-JP7546 W 20030613

OTHER SOURCE(S): MARPAT 140:42178

GI



I



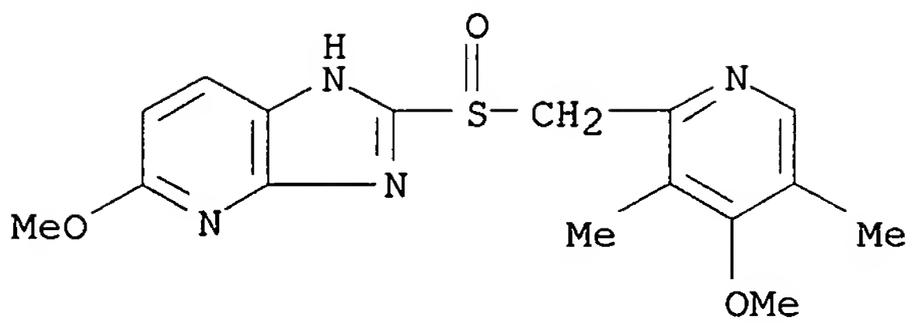
II

AB Title compds. I [wherein A = (un)substituted pyridine ring; B = (un)substituted benzene or monocyclic aromatic heterocycle; X1 and X2 = O or S; W = W1ZW2; W1 and W2 = independently divalent hydrocarbon chain or a bond; Z = (un)substituted divalent hydrocarbon ring, divalent heterocyclic ring, O, SO0-2, or NE; E = H, alkanoyl, (ar)alkoxycarbonyl, thiocarbamoyl, alkylsulfinyl, alkylsulfonyl, (alkyl)sulfamoyl, arylsulfamoyl, arylsulfinyl, arylsulfonyl, arylcarbonyl, or (un)substituted hydrocarbon, heterocyclyl, or carbamoyl; R = (un)substituted hydrocarbon or heterocyclyl; R and W may be bonded to each other; D1 and D2 = independently a bond, O, S, or NR1; R1 = H or (un)substituted hydrocarbon; Y = (un)substituted hydrocarbon or heterocyclyl; with provisos; and salts thereof] were prepared For example, reaction of bis(trichloromethyl)carbonate with 2-(methylamino)ethyl acetate•HCl in the presence of pyridine in THF, followed by coupling with (R)-2-[[[3-methyl-4-(2,2,2-trifluoroethoxy)-2-pyridyl]methyl]sulfinyl]-1H-benzimidazole using a catalytic amount of 4-dimethylaminopyridine and TEA in THF, gave II. Compds. of the invention are proton pump inhibitor prodrugs, which show superior antiulcer activity, gastric acid secretion inhibitory action, mucosa-protecting action, and anti-Helicobacter pylori action (no data).

IT 113712-98-4, 5-Methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridyl)methyl]sulfinyl]-1H-imidazo[4,5-b]pyridine
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of prodrugs containing benzimidazoles and analogs as proton pump
inhibitors for treatment of peptic ulcers)

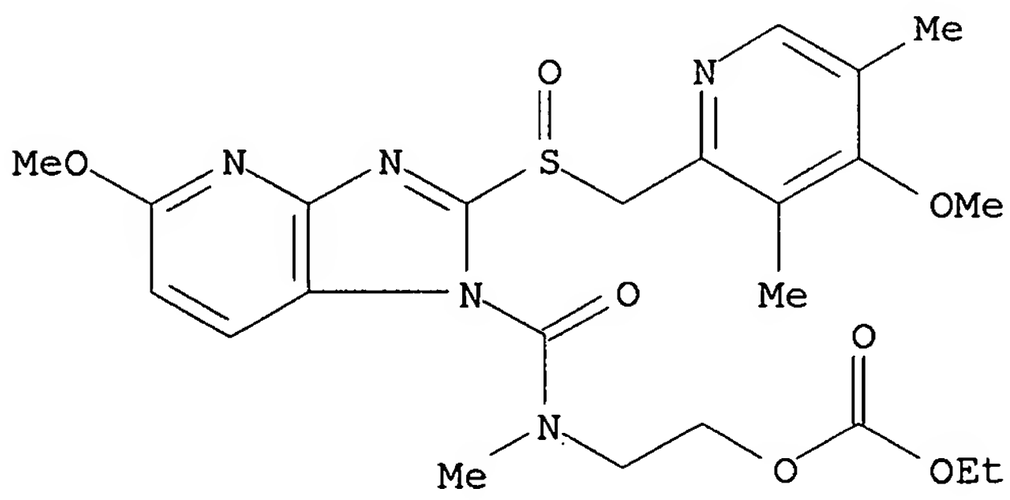
RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



IT 635751-89-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of prodrugs containing benzimidazoles and analogs as proton pump
inhibitors for treatment of peptic ulcers)
RN 635751-89-2 CAPLUS
CN Carbonic acid, ethyl 2-[[[5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-1H-imidazo[4,5-b]pyridin-1-yl]carbonyl]methylamino]ethyl ester, (+)- (9CI) (CA INDEX NAME)

Rotation (+).

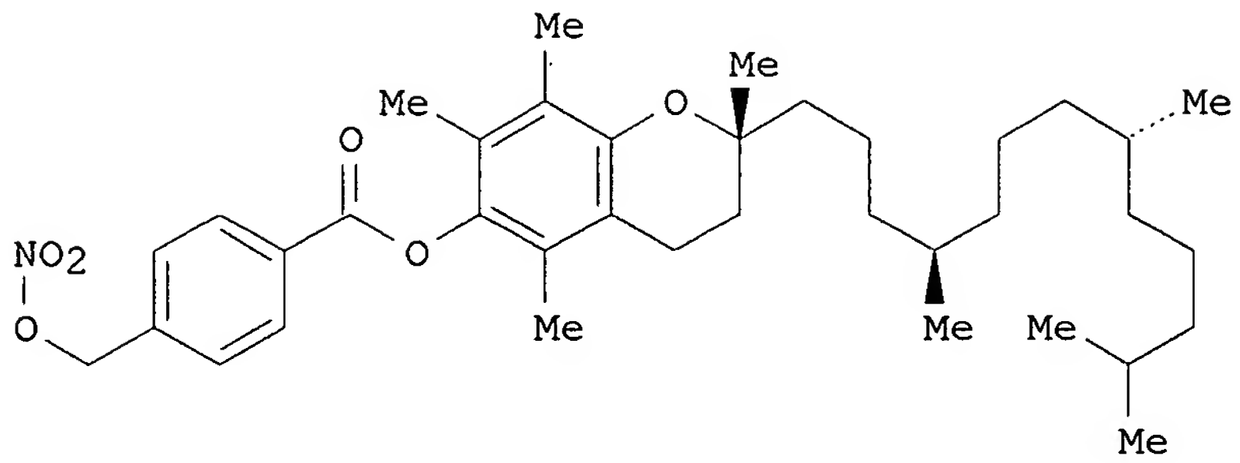


REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 24 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:652131 CAPLUS
DOCUMENT NUMBER: 139:214237
TITLE: Preparation of nitrate prodrugs able to release nitric oxide in a controlled and selective way and their use for prevention and treatment of inflammatory, ischemic and proliferative diseases
INVENTOR(S): Scaramuzzino, Giovanni
PATENT ASSIGNEE(S): Italy
SOURCE: Eur. Pat. Appl., 313 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1336602	A1	20030820	EP 2002-425075	20020213 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRIORITY APPLN. INFO.:			EP 2002-425075	20020213

GI



II

AB New pharmaceutical compds. of general formula F-(X)q (I) [q = 1-5, preferably 1; F is chosen among drugs such as δ-tocopherol, clidanac, diethylhomospermine, glucosamine, thymocartin, vofopitant, etc.; X is chosen among 4 groups M, T, V, and Y where M = ONO2, nitrate salt, nitrite ester, ONO, thoinitrite, SNO, etc., T = OR1-M, OR1OR1-M, SR1NR2R1-M, NR2R1-M, NR2R1SR1-M, etc., R1 = saturated or unsatd., linear or branched alkylene, having 1 to 21 carbon atoms or a saturated or unsatd., optionally heterosubstituted or branched cycloalkylene, having 3 to 7 carbon atoms or an optionally heterosubstituted arylene having 3 to 7 carbon atoms; R2 = H, saturated or unsatd., linear or branched 1-21 carbon atom alkyl, saturated or unsatd. optionally heterosubstituted or branched 3-7 carbon cycloalkyl, optionally heterosubstituted 3-7 carbon aryl; R1, R2 = OH, SH, F, Cl, Br, OPO3H2, CO2H, etc.; bond between F and T = carboxylic ester, carboxylic amide, glycoside, azo, thioester, sulfonic ester, etc.; V = Z-M2, OZ-M2, NR2Z-M2, R1Z-M2, OR1-M2, OR1Z-M2, M2 = M, R1-M, OR1-M, SR1-M, NR2R1-M; ZM2 = COCH2CH(M2)CH2N+Me3, COCH2CH2COM2, COCH(NHR2)CH2M2, etc.; Y = 4-COC6H4CH2ONO2, O(CH2)4ONO2, COCH(NH2)CH2ONO2, 3-OC6H4CH2ONO2, etc.] were prepared For example, α-tocopherol reacted with 4-HO2CC6H4CH2ONO2 to give the nitroxymethyl derivative II. The compds. of general formula I are nitrate prodrugs which can release nitric oxide in vivo in a controlled and selective way and without hypotensive side effects and for this reason they are useful for the preparation of medicines for prevention and treatment of inflammatory, ischemic, degenerative and proliferative diseases of musculoskeletal, tegumental, respiratory, gastrointestinal, genito-urinary and central nervous systems.

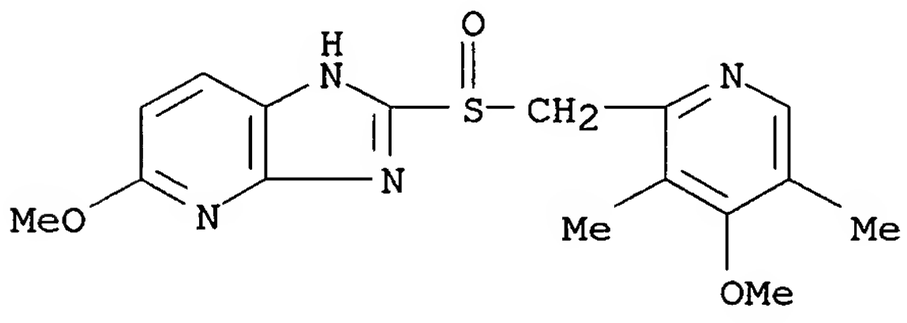
IT 586349-19-1P 586349-47-5P 586349-49-7P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of nitrate prodrugs for treating or preventing inflammatory, ischemic, degenerative, and proliferative diseases)

RN 586349-19-1 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, mononitrate (9CI) (CA INDEX NAME)

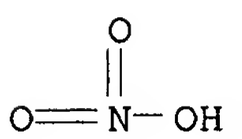
CM 1

CRN 113712-98-4
CMF C16 H18 N4 O3 S

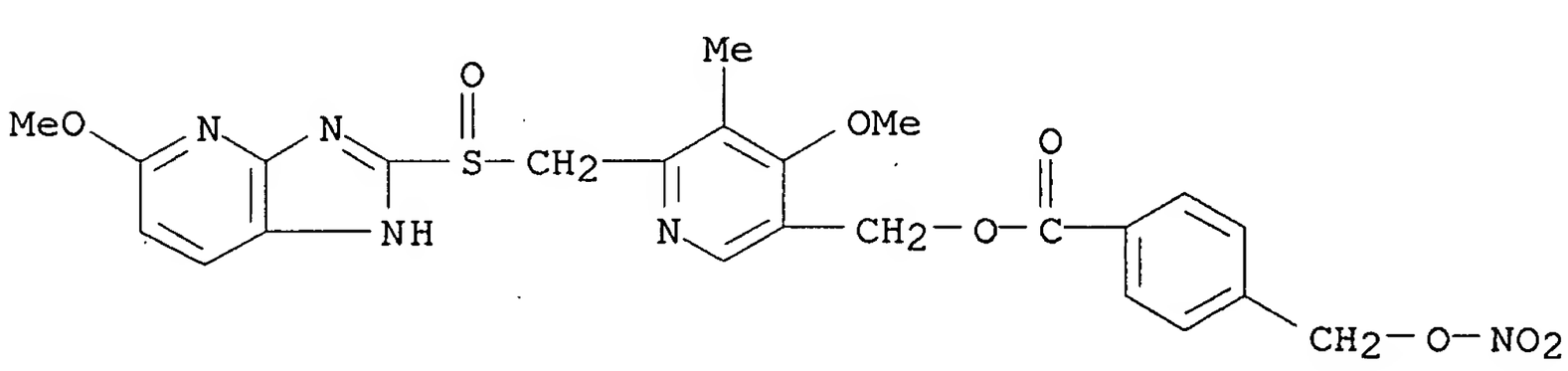


CM 2

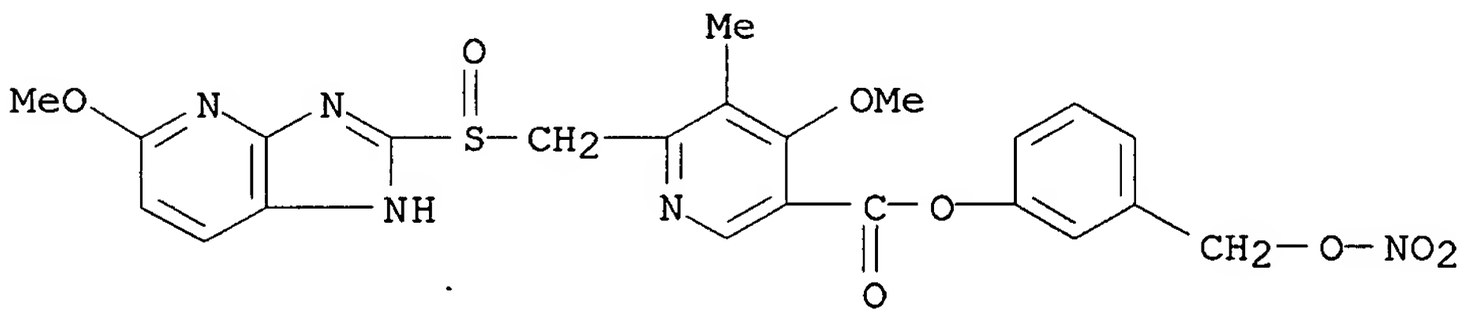
CRN 7697-37-2
CMF H N O3



RN 586349-47-5 CAPLUS
CN Benzoic acid, 4-[(nitrooxy)methyl]-, [4-methoxy-6-[[(5-methoxy-1H-imidazo[4,5-b]pyridin-2-yl)sulfinyl]methyl]-5-methyl-3-pyridinyl]methyl ester (9CI) (CA INDEX NAME)



RN 586349-49-7 CAPLUS
CN 3-Pyridinecarboxylic acid, 4-methoxy-6-[[(5-methoxy-1H-imidazo[4,5-b]pyridin-2-yl)sulfinyl]methyl]-5-methyl-, 3-[(nitrooxy)methyl]phenyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 25 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:319683 CAPLUS
DOCUMENT NUMBER: 138:326593
TITLE: Granules containing acid-unstable chemicals in large amount
INVENTOR(S): Shimizu, Toshihiro; Nakano, Yoshinori
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003032953	A1	20030424	WO 2002-JP10720	20021016 <--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2463690	A1	20030424	CA 2002-2463690	20021016	<--
AU 2002343991	A1	20030428	AU 2002-343991	20021016	<--
JP 2003192579	A	20030709	JP 2002-301866	20021016	<--
EP 1459737	A1	20040922	EP 2002-775358	20021016	<--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

CN 1571659	A	20050126	CN 2002-820486	20021016	
US 2005003005	A1	20050106	US 2004-492690	20040415	
JP 2006282677	A	20061019	JP 2006-203539	20060726	
PRIORITY APPLN. INFO.:			JP 2001-319444	A 20011017	
			JP 2002-301866	A3 20021016	
			WO 2002-JP10720	W 20021016	

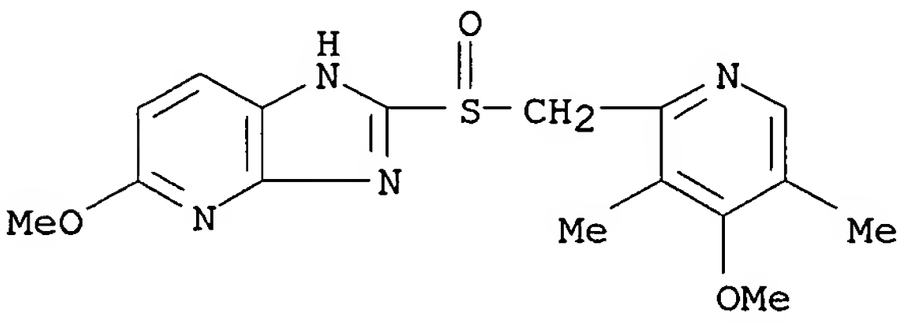
OTHER SOURCE(S): MARPAT 138:326593

AB It is intended to provide prepns. such as capsules containing an acid-unstable chemical (in particular, a benzimidazole compound having an antiulcer effect, etc.) at a high concentration which are prepared by using about 12 % by weight or more (based on the total granules) of the acid-unstable chemical and blending a basic inorg. salt therewith to give granules of about 600 μm or more in the average grain size. Granules were prepared containing lansoprazole 30, sucrose/starch spherical particles 50, MgCO3 10, sucrose 30, starch 14, low-substituted hydroxypropyl cellulose 15, and hydroxypropyl cellulose 1 part. The granules were filled into capsules, which were then coated with enteric-soluble polymethacrylate compns.

IT 113712-98-4, TU 199
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(granules containing acid-unstable compds. and inorg. salts)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 26 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:	2003:221490 CAPLUS
DOCUMENT NUMBER:	138:260440
TITLE:	Self emulsifying drug delivery system containing NSAIDs
INVENTOR(S):	Holmberg, Christina
PATENT ASSIGNEE(S):	Astrazeneca AB, Swed.
SOURCE:	PCT Int. Appl., 49 pp. CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003022249	A1	20030320	WO 2002-SE1598	20020905 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002329149	A1	20030324	AU 2002-329149	20020905 <--
EP 1427392	A1	20040616	EP 2002-765747	20020905 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005504788	T	20050217	JP 2003-526379	20020905
US 2004248974	A1	20041209	US 2004-488585	20040304 <--

PRIORITY APPLN. INFO.: SE 2001-2993 A 20010907
WO 2002-SE1598 W 20020905

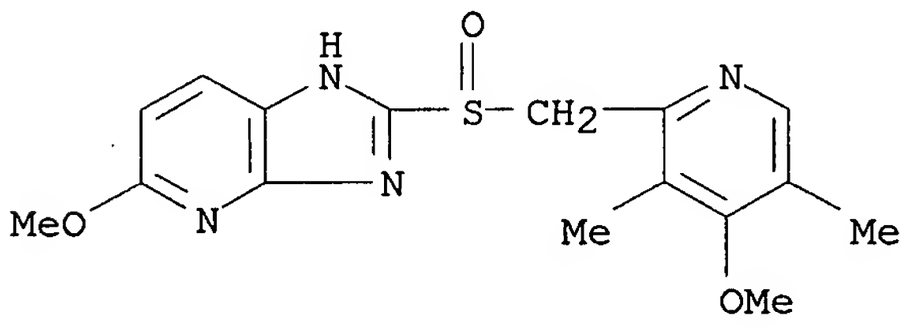
OTHER SOURCE(S): MARPAT 138:260440

AB A pharmaceutical composition suitable for oral administration, in form of an emulsion pre-concentrate, comprises 1 or more NO-releasing NSAID(s), 1 or more surfactants, of which at least one is phospholipid, the composition forming an in-situ oil-in-water emulsion upon contact with gastrointestinal fluids. The composition may optionally also comprise an addnl. oil or semi-solid fat. Further, 1 or more short-chain alcs. can optionally be included in the composition Also within the scope of the invention is a combination with a proton pump inhibitor. The pharmaceutical composition is useful in the treatment of pain and inflammation. Further within the scope of the invention is kit comprising a pharmaceutical composition according to the invention in a unit dosage form, in combination with a proton pump inhibitor, and the proton pump inhibitor is enteric coated. Thus, a formulation contained Lipoid S100 0.30, propylene glycol 0.90, and a NO-releasing NSAID 4.00 g.

IT 113712-98-4
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(self emulsifying drug delivery system containing NSAIDs)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

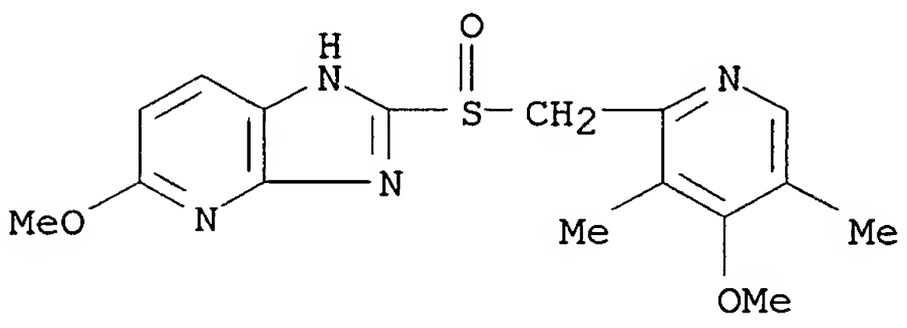
L5 ANSWER 27 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:733615 CAPLUS

DOCUMENT NUMBER: 138:296876
TITLE: Tenatoprazole: benatoprazole, TU 199
AUTHOR(S): Anon.
CORPORATE SOURCE: N. Z.
SOURCE: Drugs in R&D (2002), 3(4), 276-277
CODEN: DRDDFD; ISSN: 1174-5886
PUBLISHER: Adis International Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. Benatoprazole [TU 199; tenatoprazole] is an imidazopyridine derivative and a proton pump inhibitor. It is under development with Mitsubishi Pharma Corporation (Mitsubishi Chemical) and Hokuriku Seiyaku (BASF Pharma, now Abbott Labs.) in Japan as an oral antiulcer agent and for the treatment of reflux esophagitis and Zollinger-Ellison syndrome. An application for approval of benatoprazole (formerly tenatoprazole) has been registered in Japan. The pharmacodynamics and application in therapy for peptic ulcer disease are discussed.

IT 113712-98-4, Tenatoprazole
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmacodynamics and antiulcer application of proton pump inhibitor tenatoprazole (benatoprazole, TU 199))

RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 28 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:752824 CAPLUS
DOCUMENT NUMBER: 135:314438
TITLE: Proteolipid subunits of vacuolar H+-ATPase (ATP6F) as tumor antigens, application to cancer therapy, and use of proton pump inhibitor as anticancer agent
INVENTOR(S): Sato, Nobuo; Suzuki, Nobutaka; Yamaguchi, Masaaki; Yamaguchi, Nobuo; Okuma, Katsuji
PATENT ASSIGNEE(S): Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 79 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001286284	A	20011016	JP 2000-103966	20000405 <--

PRIORITY APPLN. INFO.: JP 2000-103966 20000405

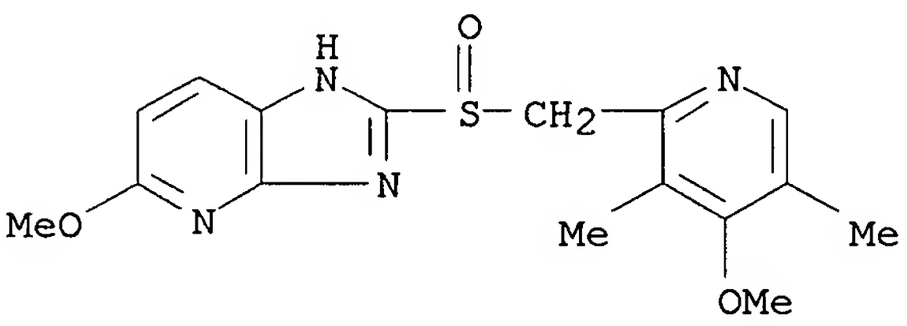
AB Proteolipid subunits of vacuolar H+-ATPase (V-ATPase) as tumor antigens, use of antibodies and antisense oligonucleotides targeting those antigens as anticancer agent, and use of proton pump inhibitor as anticancer agent,

are disclosed. Tumor antigen recognized by monoclonal antibody KCT-1 was isolated from thyroid cancer cell line TPC-1. The amino acid sequence of this antigen named SSY (S-1) was found match that of vacuolar H+-ATPase proteolipid subunit (ATP6F, c'' subunit). The epitope of SSY antigen for KCT-1 antibody was determined SSY antigen was found to strongly expressed in all the cancers examined; thyroid cancer, breast cancer, stomach cancer, esophagus cancer (squamous cell carcinoma), laryngeal cancer, colon cancer, rectal cancer, anal cancer, pancreatic cancer, lung cancer, renal cancer, bladder cancer, ovarian cancer, uterus cancer, cervical cancer, cunnus cancer, skin cancer, melanoma, central or peripheral nervous system cancer, gingival cancer, pharyngeal carcinoma, mediastinal tumor, liver cancer, bile duct cancer (cholangioma), gallbladder cancer, renal pelvis tumor, ureter cancer, testicular cancer, fallopian tube cancer, vaginal cancer, sarcoma, leukemia, erythroleukemia, multiple myeloma, malignant lymphoma, and carcinosarcoma. CDNA for a mouse homolog was cloned. Intradermal, s.c., and oral administration of the antigen in mouse demonstrated antitumor activity and safety. Antitumor activity was also demonstrated by phosphorothioate antisense oligonucleotide. Various inhibitors of V-ATPase, H+/K+-ATPase, and H+/Cl- symporter were found to have antitumor activity.

IT 113712-98-4, TU-199
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(proteolipid subunits of vacuolar H+-ATPase (ATP6F) as tumor antigens, application to cancer therapy, and use of proton pump inhibitor as anticancer agent)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 29 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:676579 CAPLUS
DOCUMENT NUMBER: 135:231708
TITLE: New self emulsifying drug delivery system
INVENTOR(S): Holmberg, Christina; Siekmann, Britta
PATENT ASSIGNEE(S): AstraZeneca AB, Swed.
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001066088	A1	20010913	WO 2001-SE467	20010306 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,				

DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA	2401498	A1	20010913	CA 2001-2401498	20010306 <--
EP	1267832	A1	20030102	EP 2001-910305	20010306 <--
EP	1267832	B1	20040602		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

BR	2001009014	A	20030603	BR 2001-9014	20010306 <--
JP	2003525894	T	20030902	JP 2001-564741	20010306 <--
HU	200300882	A2	20030929	HU 2003-882	20010306 <--
EE	200200500	A	20040216	EE 2002-500	20010306 <--
AT	268162	T	20040615	AT 2001-910305	20010306 <--
NZ	521009	A	20040625	NZ 2001-521009	20010306 <--
PT	1267832	T	20040930	PT 2001-910305	20010306 <--
ES	2220728	T3	20041216	ES 2001-1910305	20010306 <--
RU	2270675	C2	20060227	RU 2002-122744	20010306
IN	2002MN01102	A	20050304	IN 2002-MN1102	20020816
ZA	2002006740	A	20031124	ZA 2002-6740	20020822 <--
MX	2002PA08657	A	20030224	MX 2002-PA8657	20020904 <--
US	2003161846	A1	20030828	US 2002-220791	20020905 <--
NO	2002004272	A	20021105	NO 2002-4272	20020906 <--
HK	1050632	A1	20050318	HK 2003-102781	20030416

PRIORITY APPLN. INFO.: SE 2000-773 A 20000308
WO 2001-SE467 W 20010306

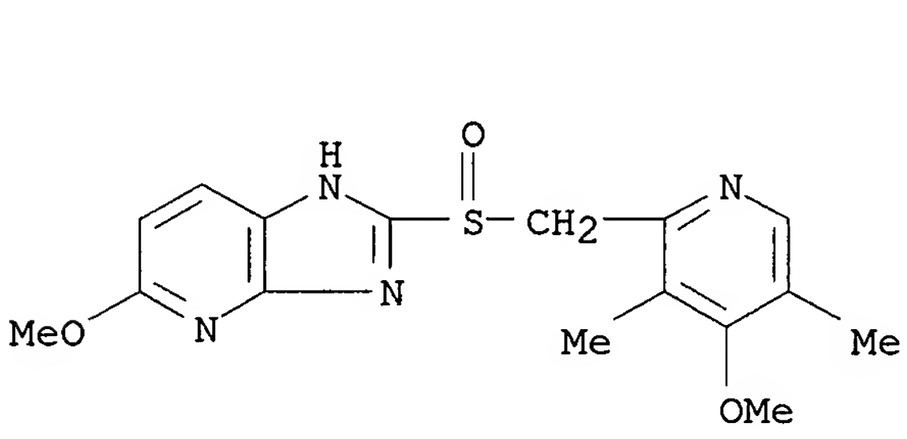
OTHER SOURCE(S): MARPAT 135:231708

AB The present invention claims and discloses a pharmaceutical composition suitable for oral administration, in form of an emulsion pre-concentrate, comprising: 1 or more NO-releasing NSAID(s), 1 or more surfactants, optionally an addnl. oil or semi-solid fat. The composition forms an in-situ oil-in-water emulsion upon contact with gastrointestinal fluids. The composition may optionally also comprise 1 or more short-chain alcs. Also within the scope of the invention is a combination with a proton pump inhibitor. The pharmaceutical composition is useful in the treatment of pain and inflammation. Further within the scope of the invention is kit comprising a pharmaceutical composition according to the invention in a unit dosage form, in combination with a proton pump inhibitor, and the proton pump inhibitor is enteric coated. Thus, a semisolid formulation contained a NO-releasing NSAID 750, Pluronic F127 450, and omeprazole 20 g.

IT 113712-98-4
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(self emulsifying drug delivery system)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 30 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:300517 CAPLUS
DOCUMENT NUMBER: 134:316135
TITLE: Formulation of substituted benzimidazoles
INVENTOR(S): Bruells, Mikael

PATENT ASSIGNEE(S): Astrazeneca Ab, Swed.
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001028558	A1	20010426	WO 2000-SE1992	20001013 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
TW 236372	B	20050721	TW 2000-89121063	20001009
CA 2425199	A1	20010426	CA 2000-2425199	20001013 <--
BR 2000014895	A	20020618	BR 2000-14895	20001013 <--
TR 200201103	T2	20020821	TR 2002-1103	20001013 <--
EP 1274427	A1	20030115	EP 2000-973295	20001013 <--
EP 1274427	B1	20050921		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
HU 200203121	A2	20030128	HU 2002-3121	20001013 <--
JP 2003512327	T	20030402	JP 2001-531388	20001013 <--
EE 200200204	A	20030415	EE 2002-204	20001013 <--
NZ 518155	A	20040730	NZ 2000-518155	20001013 <--
AU 782866	B2	20050901	AU 2001-11823	20001013
AT 304851	T	20051015	AT 2000-973295	20001013
ES 2246903	T3	20060301	ES 2000-973295	20001013
RU 2286782	C2	20061110	RU 2002-110328	20001013
US 6730685	B1	20040504	US 2000-701714	20001201 <--
BG 106602	A	20021229	BG 2002-106602	20020410 <--
ZA 2002002905	A	20030714	ZA 2002-2905	20020412 <--
MX 2002PA03900	A	20020930	MX 2002-PA3900	20020418 <--
NO 2002001860	A	20020521	NO 2002-1860	20020419 <--
HK 1051142	A1	20060203	HK 2003-103347	20030513
PRIORITY APPLN. INFO.:			SE 1999-3831 A	19991022
			WO 2000-SE1992 W	20001013

OTHER SOURCE(S): MARPAT 134:316135

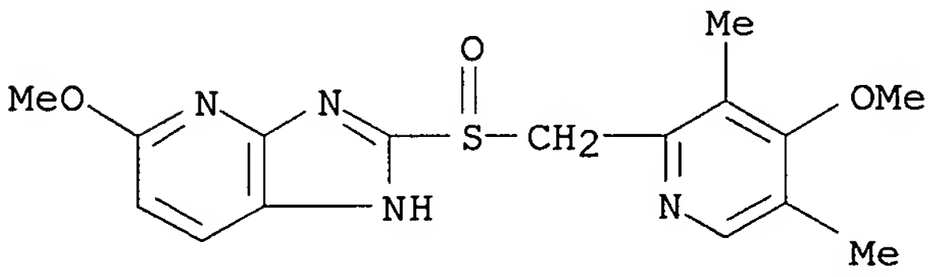
AB The present invention relates to stable liquid formulations that comprise a water free or almost water free, polyethylene glycol solution of sodium or potassium salt of substituted benzimidazoles or their enantiomers as H+,K+-ATPase inhibitors. Alternatively, the sodium or potassium salt of the H+,K+-ATPase inhibitor may be formed in situ in the polyethylene glycol solution by adding sodium or potassium hydroxide together with the active compound The invention is also directed to the preparation of the claimed formulation, use of the stable liquid formulations in medicine and in the treatment of gastrointestinal diseases. For example, omeprazole sodium was formulated in a liquid formulation containing PEG 400. The solution was not sensitive to oxygen in the head space nor to a small water content. The high solubility of omeprazole sodium in PEG is favorable regarding the formulation aspects of a parenteral pharmaceutical product.

IT 335299-59-7 335299-60-0
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(Uses)
(liquid formulations of substituted benzimidazoles as proton pump inhibitors for treatment of gastrointestinal diseases)

RN 335299-59-7 CAPLUS

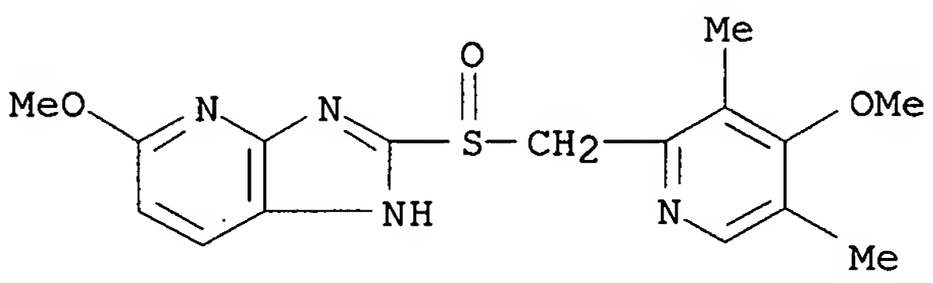
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 335299-60-0 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-, potassium salt (9CI) (CA INDEX NAME)



● K

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 31 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:608578 CAPLUS

DOCUMENT NUMBER: 133:203023

TITLE: Nitrosated and nitrosylated proton pump inhibitors, compositions and methods of use

INVENTOR(S): Garvey, David S.; Letts, L. Gordon; Tam, Sang William; Wang, Tiansheng; Richardson, Stewart K.

PATENT ASSIGNEE(S): Nitromed, Inc., USA

SOURCE: PCT Int. Appl., 100 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050037	A1	20000831	WO 2000-US2524	20000225 <--

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2362930	A1	20000831	CA 2000-2362930		20000225 <--
AU 2000032196	A	20000914	AU 2000-32196		20000225 <--
AU 781133	B2	20050505			
EP 1154771	A1	20011121	EP 2000-910039		20000225 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
JP 2002537336	T	20021105	JP 2000-600648		20000225 <--
US 6852739	B1	20050208	US 2000-512829		20000225
US 2004266828	A1	20041230	US 2004-866303		20040614 <--
AU 2005202553	A1	20050707	AU 2005-202553		20050610
PRIORITY APPLN. INFO.:			US 1999-122111P	P	19990226
			US 2000-512829	A3	20000225
			WO 2000-US2524	W	20000225

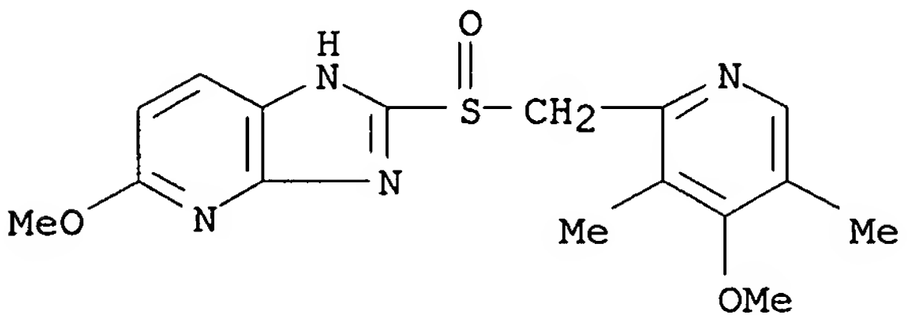
OTHER SOURCE(S): MARPAT 133:203023

AB The invention describes nitrosated and/or nitrosylated proton pump inhibitor compds., as well as compns. comprising ≥1 proton pump inhibitor compound that is optionally substituted with ≥1 NO and/or NO2 group, and, optionally, ≥1 compound that donates, transfers or releases nitric oxide, stimulates endogenous synthesis of nitric oxide, elevates endogenous levels of endothelium-derived relaxing factor, or is a substrate for nitric oxide synthase, and/or ≥1 nonsteroidal antiinflammatory drug, selective COX-2 inhibitor antacid, bismuth-containing reagent, acid-degradable antibacterial compound, and mixts. thereof. The invention also provides methods for treating and/or preventing gastrointestinal disorders; facilitating ulcer healing; decreasing the recurrence of ulcers; improving gastroprotective properties, anti-Helicobacter pylori properties or antacid properties of proton pump inhibitors; decreasing or reducing the gastrointestinal toxicity associated with the use of nonsteroidal antiinflammatory compds.; and treating Helicobacter pylori and viral infections. The compds. and/or compns. of the present invention can also be provided in the form of a pharmaceutical kit. Preparation of e.g. nitrosylated lansoprazole is described. Compared to lansoprazole, the nitrosylated lansoprazole significantly inhibited the formation of EtOH/HCl-induced gastric lesions.

IT 113712-98-4D, Tenatoprazole, nitrosated and nitrosylated derivs.
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nitrosated and nitrosylated proton pump inhibitors, compns., combinations, and methods of use)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 32 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:15181 CAPLUS
DOCUMENT NUMBER: 132:64176

TITLE: Preparation of 2-hydroxymethylpyridine metal complexes as intermediates for pyridinebenzimidazoles.

INVENTOR(S): Nikolopoulos, Angelo; Schickaneder, Helmut; Kocher, Christian; Murphy, Trevor; Hermann, Gesine

PATENT ASSIGNEE(S): Russinsky Limited, Ire.

SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2

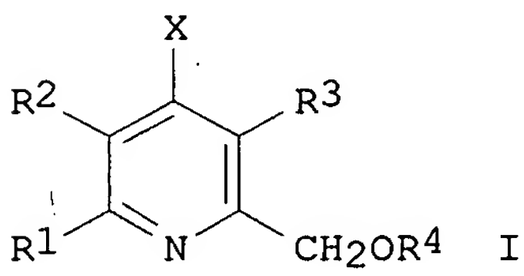
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000000474	A1	20000106	WO 1999-IE55	19990618 <--
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DE, DK, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9943877	A	20000117	AU 1999-43877	19990618 <--

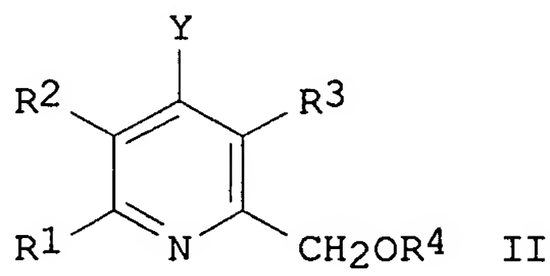
PRIORITY APPLN. INFO.: IE 1998-514 A 19980626
WO 1999-IE55 W 19990618

OTHER SOURCE(S): CASREACT 132:64176; MARPAT 132:64176

GI



I



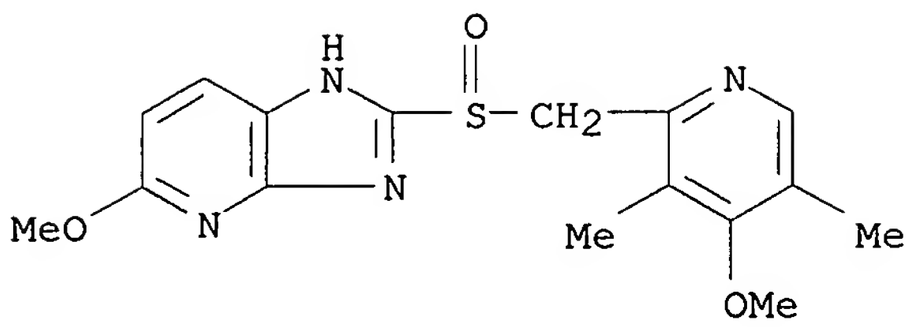
II

AB IkMzAl(OR5)mSn [R1-R3 = H, alkyl, CF3, CHF2, CH2F, alkoxy, alkoxyalkoxy, OCH2CF3; R4 = H, alkyl, PhCH2, AcO, PhCH2O, trialkylsilyl, neg. charge; R5 = alkyl, aryl, CH2CF3, CF3, CHF2, alkylalkoxy; X = halo, NO2, SO3, OH; M = alkaline earth metal, third main group element, transition metal; S = solvent; k = 1-4; l = 1-3; m = 0-3; n ≥0; z = l+m; with a proviso] and IIkMz(OR5)mSn [Y = alkoxy, aryloxy, OCH2CF3, alkoxyalkoxy, alkylthio, alkylthioalkylthio; z = m; other variables as above], were prepared Thus, 4-nitro-2,3,5-trimethylpyridine N-oxide was heated in HOAc/Ac2O at 20-100° for 1 h to give 88% 2-acetoxymethyl derivative, which was stirred at 10-30° with NaOH in EtOH for 1 h to give 84% 3,5-dimethyl-2-hydroxymethyl-4-nitropyridine (II). II in MeOH was treated with ZnCl2 and with NaOMe in MeOH to give 100% Zn(II)ClOMe.

IT 113712-98-4P, TU-199
RL: PNU (Preparation, unclassified); PREP (Preparation)
(preparation of 2-hydroxymethylpyridine metal complexes as intermediates for pyridinebenzimidazoles)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



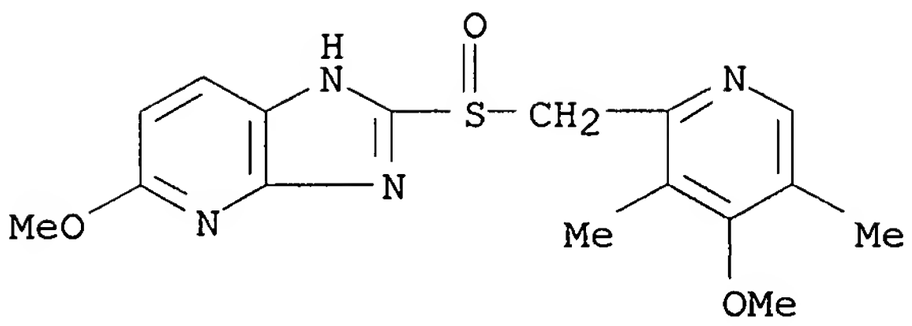
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 33 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:403179 CAPLUS
DOCUMENT NUMBER: 131:208915
TITLE: General pharmacological properties of the new proton pump inhibitor (±)-5-methoxy-2-[[(4-methoxy-3,5-dimethylpyrid-2-yl)methyl]sulfinyl]-1H-imidazo[4,5-b]pyridine
AUTHOR(S): Kakinoki, Bunpei; Ono, Chizuko; Yamazaki, Noriyuki; Chikamatsu, Noriko; Wakatsuki, Daisuke; Uchiyama, Kazuyuki; Morinaka, Yasuhiro
CORPORATE SOURCE: Medicinal Research Group II, Kazusa Research Laboratories, Tokyo Tanabe Co., Ltd., Kisarazu, Japan
SOURCE: Methods and Findings in Experimental and Clinical Pharmacology (1999), 21(3), 179-187
CODEN: MFEPDX; ISSN: 0379-0355
PUBLISHER: Prous Science
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The general pharmacol. profiles of the title compound TU-199 on the central nervous system, cardiorespiratory system, autonomic nervous system, gastrointestinal system and renal functions were investigated. TU-199 had no effects on general signs and behavior in mice. TU-199 (300 mg/kg p.o.) decreased locomotor activity 3 h after administration in mice. TU-199 had no effect on pentobarbital-induced hypnosis, analgesic activity and electroshock-induced convulsion in mice, and on rectal temperature in rats. However, TU-199 (300 mg/kg p.o.) showed slight anticonvulsant activity on pentylenetetrazole-induced convulsion in mice. TU-199 had no effect on respiratory rate, blood pressure, heart rate, femoral blood flow and ECG in anesthetized dogs. TU-199 (10-4 M) caused the cumulative concentration-response curve obtained with acetylcholine in isolated guinea pig ileum to shift to the right. However, TU-199 showed no effect on contraction of isolated guinea pig ileum and had no effect on intestinal motility in mice, gastric emptying in rats, bile secretion in rats and carbachol-induced salivary secretion in mice. TU-199 had no effect on urinary volume and excretion of electrolytes in rats. These results suggest that TU-199 does not induce serious adverse effects on the central nervous system, cardiorespiratory system, autonomic nervous system, gastrointestinal system and renal functions with the exception of a decrease in spontaneous motor activity with high doses.

IT 113712-98-4, TU-199
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmacol. properties of proton pump inhibitor TU-199)

RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



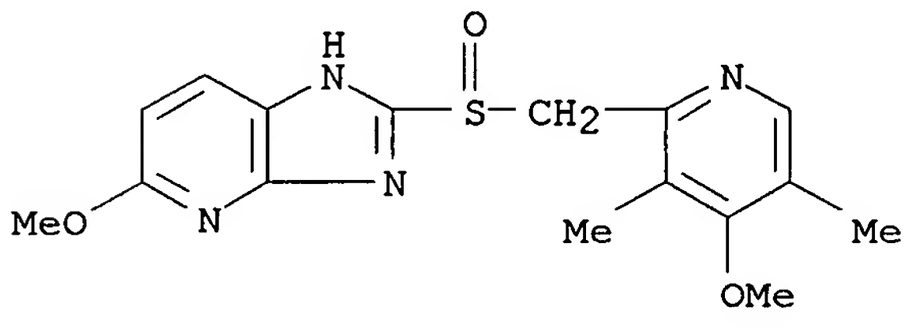
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 34 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:367805 CAPLUS
DOCUMENT NUMBER: 131:96947
TITLE: Pharmacokinetic studies of (±)-5-methoxy-2-[[(4-methoxy-3,5-dimethylpyrid-2-yl)methyl]sulfinyl]-1H-imidazo[4, 5-b]pyridine (TU-199). (V). Examination of drug interaction in plasma protein binding
AUTHOR(S): Kinbara, Mihoko; Ishiwata, Tomoe; Morotome, Kazuo
CORPORATE SOURCE: Kazusa Research Laboratories, Tokyo Tanabe Co., Ltd., Yana Kisarazu, 292-0812, Japan
SOURCE: Iyakuhin Kenkyu (1999), 30(3), 128-133
CODEN: IYKEDH; ISSN: 0287-0894
PUBLISHER: Nippon Koteisho Kyokai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB The present study was conducted to determine the types of protein to which TU-199 binds, and to examine whether 7 drugs (warfarin, diazepam, digitoxin, nifedipine, phenytoin, tolbutamide and propranolol) compete with TU-199 for binding to human plasma protein. In the evaluation of competitive binding, drugs were generally used at about 3 times their maximum plasma concentration (Cmax) obtained after a single oral administration to humans. 1. TU-199 (5 μg/mL) binding rates with purified human albumin, α1-acidic glycoprotein and γ-globulin were 99.4%, 54.9% and 23.8%, resp. 2. The TU-199 (5 μg/mL) binding rate with human plasma protein was 99.7%. 3. Of the 7 drugs tested, tolbutamide significantly decreased TU-199's plasma protein binding rate from 99.7% to 99.3% at 150 μg/mL, but caused no significant decrease at 50 μg/mL (Cmax). The other 6 drugs had no effect on the binding of TU-199 with plasma protein. 4. TU-199 had no effect on the binding of the 7 drugs with plasma protein.

IT 113712-98-4, TU-199
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(pharmacokinetic studies of (±)-5-methoxy-2-[[(4-methoxy-3,5-dimethylpyrid-2-yl)methyl]sulfinyl]-1H-imidazo[4, 5-b]pyridine (TU-199). (V). examination of drug interaction in plasma protein binding)

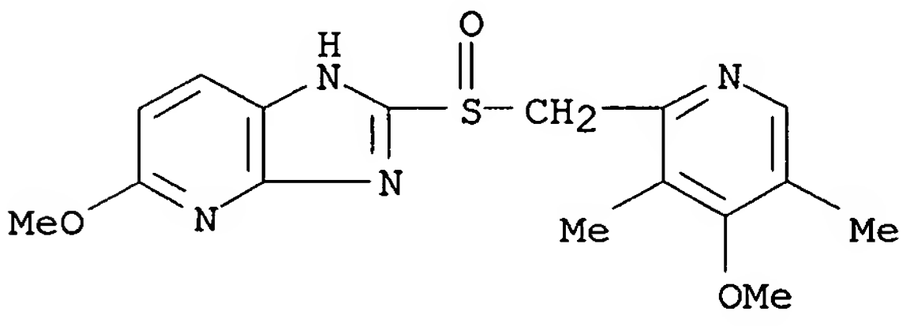
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 35 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:367804 CAPLUS
DOCUMENT NUMBER: 131:96946
TITLE: Pharmacokinetic studies of (±)-5-methoxy-2-[[(4-methoxy-3,5-dimethylpyrid-2-yl)methyl]sulfinyl]-1H-imidazo[4, 5-b]pyridine (TU-199). (IV). Plasma concentration of TU-199 in rats and dogs
AUTHOR(S): Saito, Shinko; Sebata, Noriyuki; Ishiwata, Tomoe; Kinbara, Mihoko; Morotome, Kazuo
CORPORATE SOURCE: Kazusa Research Laboratories, Tokyo Tanabe Co., Ltd., Yana Kisarazu, 292-0812, Japan
SOURCE: Iyakuhin Kenkyu (1999), 30(3), 119-127
CODEN: IYKEDH; ISSN: 0287-0894
PUBLISHER: Nippon Koteisho Kyokai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB Plasma concns. of TU-199 were determined after oral, i.v. and intraduodenal administration of TU-199 to rats and dogs. 1. After oral administration of TU-199 to non-fasting male rats at a dose of 2.5 mg/kg, the plasma concentration of TU-199 reached a maximum of 2.19 μg/mL at 0.26 h, and declined exponentially with a half-life of 1.38 h. The bioavailability was 37.2%. In the case of intraduodenal administration, the bioavailability was 76.6%. 2. After oral administration of TU-199 to male rats at the doses of 2.5, 10, and 40 mg/kg, both Cmax and AUC0.apprx.∞ closely proportional to the dose. 3. After oral administration of TU-199 to male rats, the plasma concentration was higher and the bioavailability was about twice as high in fasting rats as compared with non-fasting rats. 4. After oral administration of TU-199 to male rats at a dose of 2.5 mg/kg, once a day for 7 days, the plasma concentration was similar to that after a single dose. 5. After oral administration of TU-199 to female rats, the plasma concentration was higher and T1/2 was longer than in male rats, but bioavailability was similar in both sexes. 6. After oral administration of TU-199 to female dogs, the plasma concentration of TU-199 was similar to that in male dogs. 7. After oral administration of TU-199 to fasting male and female dogs at a dose of 2.5 mg/kg, the plasma concentration of TU-199 reached a maximum of 10.11 μg/mL at 0.53 h, and declined exponentially with the half-life of 1.57 h. The bioavailability was 78.3%.

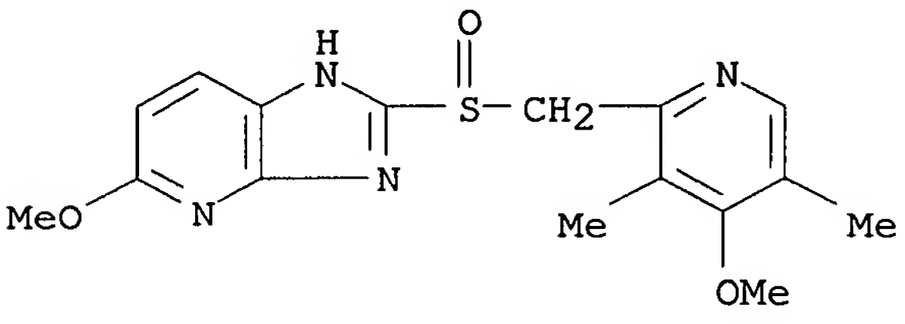
IT 113712-98-4, TU-199
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(pharmacokinetic studies of (±)-5-methoxy-2-[[(4-methoxy-3,5-dimethylpyrid-2-yl)methyl]sulfinyl]-1H-imidazo[4, 5-b]pyridine (TU-199). (IV). Plasma concentration of TU-199 in rats and dogs)
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 36 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:347657 CAPLUS
DOCUMENT NUMBER: 131:125259
TITLE: The long-lasting effect of TU-199, a novel H+,K+-ATPase inhibitor, on gastric acid secretion in dogs
AUTHOR(S): Uchiyama, Kazuyuki; Wakatsuki, Daisuke; Kakinoki, Bunpei; Takeuchi, Yoshishige; Araki, Tsutomu; Morinaka, Yasuhiro
CORPORATE SOURCE: Medicinal Research Group II, Kazusa Research Laboratories, Tokyo Tanabe Company Limited, Chiba, 292-0812, Japan
SOURCE: Journal of Pharmacy and Pharmacology (1999), 51(4), 457-464
CODEN: JPPMAB; ISSN: 0022-3573
PUBLISHER: Royal Pharmaceutical Society of Great Britain
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We have used Heidenhain-pouch dogs to investigate the effects of (±)-5-methoxy-2-{[(4-methoxy-3,5-dimethylpyrid-2-yl)methyl]sulphinyl}-1H-imidazo[4,5-b]pyridine (TU-199), an imidazopyridine derivative, on gastric acid secretion stimulated by histamine, carbachol and tetragastrin. We have also investigated the duration of the antisecretory effect of TU-199 using a measurement of intragastric pH for 24 h in gastric fistula dogs whose gastric acid secretion was stimulated by histamine. Single oral administration of TU-199 (0.1, 0.2 and 0.4 mg kg-1) dose-dependently suppressed gastric acid secretion stimulated by histamine infusion. Oral treatment with TU-199 (0.2, 0.4 and 0.8 mg kg-1) also dose-dependently inhibited acid secretion induced by carbachol and tetragastrin. The inhibitory effect of TU-199 on stimulated gastric acid secretion was more potent than that of omeprazole, a well-known H+,K+-ATPase inhibitor in dogs. Repeated oral treatment with TU-199 at a dose of 0.2 mg kg-1 once a day for seven days markedly suppressed histamine-stimulated gastric acid secretion in dogs. This inhibitory effect of TU-199 reached a maximum level after three or four doses and was more pronounced than that of omeprazole or lansoprazole. In gastric fistula dogs, the duration of intragastric pH-elevation by administration of TU-199 (0.3 mg kg-1) was much longer than that of omeprazole (0.6 mg kg-1) or lansoprazole (0.9 mg kg-1). The IC50 values (doses resulting in 50% inhibition) of TU-199, omeprazole and lansoprazole with regard to H+,K+-ATPase activity in dog gastric mucosal microsomes were 8.6, 8.8 and 9.9 μM, resp. These results indicate that TU-199 inhibits gastric acid secretion via suppression of a H+,K+-ATPase activity. Our findings also suggest that TU-199 might have potent and long-lasting effects on gastric acid secretion.

IT 113712-98-4, TU-199
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ATPase inhibitor TU-199 long-lasting effect on gastric acid secretion)
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



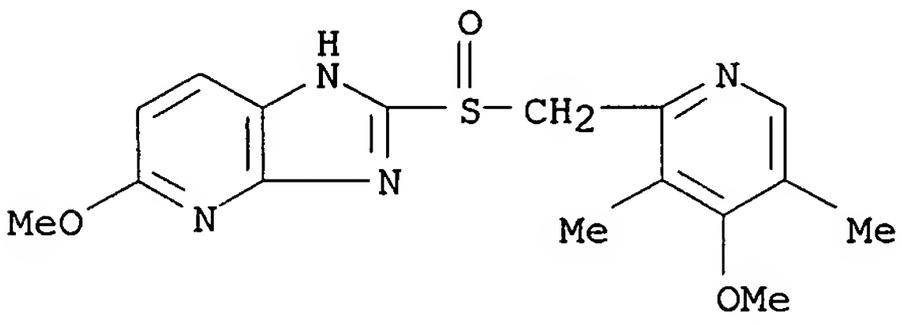
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 37 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:319622 CAPLUS
DOCUMENT NUMBER: 131:139269
TITLE: Effects of TU-199, a novel H+, K+-ATPase inhibitor, on gastric acid secretion and gastroduodenal ulcers in rats
AUTHOR(S): Uchiyama, Kazuyuki; Wakatsuki, Daisuke; Kakinoki, Bunpei; Takeuchi, Yoshishige; Araki, Tsutomu; Morinaka, Yasuhiro
CORPORATE SOURCE: Medicinal Research Group II, Kazusa Research Laboratories, Tokyo Tanabe Co. Ltd., Chiba, Japan
SOURCE: Methods and Findings in Experimental and Clinical Pharmacology (1999), 21(2), 115-122
CODEN: MFEPDX; ISSN: 0379-0355
PUBLISHER: Prous Science
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We studied the effects of TU-199, a novel H+, K+-ATPase inhibitor, on gastric acid secretion and gastroduodenal lesions in rats in comparison with those of omeprazole, TU-199 inhibited hog gastric H+,K+-ATPase activity and its potency was almost equal to that of omeprazole (IC50 = 6.2 and 4.2 μM, resp.). In vivo, TU-199 inhibited basal gastric acid secretion in pylorus-ligated rats in a dose-dependent manner (ED50 = 4.2 mg/kg p.o.). In gastric fistula rats, TU-199 (2.5 and 5 mg/kg i.d.) also inhibited gastric acid secretion stimulated by histamine, carbachol or tetragastrin. Furthermore, TU-199 prevented the formation of water-immersion restraint stress-, pylorus ligation- and indomethacin-induced gastric lesions, and mepirizole-induced duodenal ulcer in rats. These antisecretory and antiulcer effects of TU-199 were 2-4 times more potent than those of omeprazole. The results demonstrate that TU-199 potently inhibits the acid secretion and formation of ulcers in various exptl. rat models via an inhibition of H+, K+-ATPase. These findings suggest that TU-199 may have a beneficial effect against peptic ulcer disease in humans.

IT 113712-98-4, TU-199
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effects of TU-199, a novel H+, K+-ATPase inhibitor, on gastric acid secretion and gastroduodenal ulcers in rats)

RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

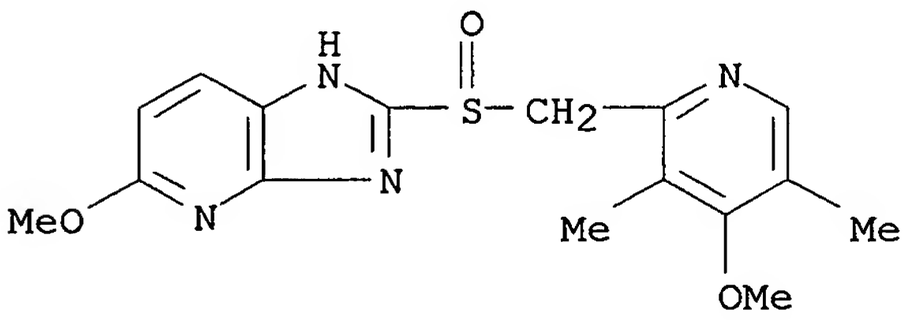
L5 ANSWER 38 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:87682 CAPLUS

DOCUMENT NUMBER: 130:320329
TITLE: Pharmacokinetic studies of TU-199. (III). Metabolism in rats and dogs
AUTHOR(S): Kurosawa, Satoshi
CORPORATE SOURCE: Tokai Res. Laboratories, Daiichi Pure Chemicals Co., Ltd., Japan
SOURCE: Yakuri to Chiryo (1998), 26(12), 2017-2032
CODEN: YACHDS; ISSN: 0386-3603
PUBLISHER: Raifu Saiensu Shuppan K.K.
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB The pharmacokinetics of TU-199 were studied in rats and dogs following oral and i.v. administration. The results are discussed with regard to the metabolic pass way of TU-199.

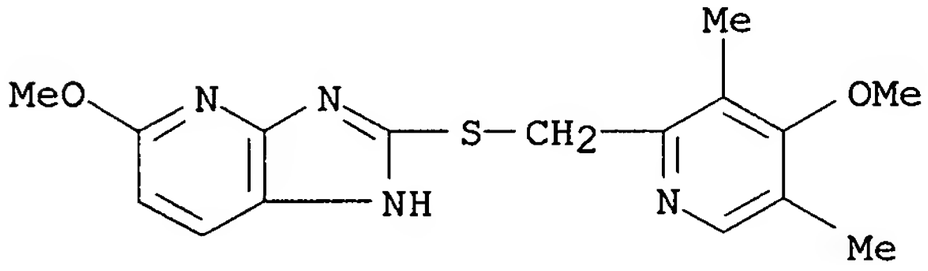
IT 113712-98-4, TU-199
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(pharmacokinetic studies of TU-199. (III). metabolism in rats and dogs)

RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)

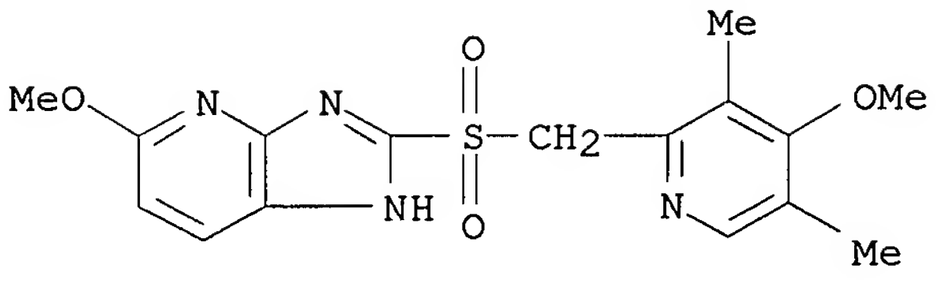


IT 113713-24-9 223713-77-7 223713-78-8
223713-79-9 223713-80-2 223713-84-6
223713-85-7 223713-86-8
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(pharmacokinetic studies of TU-199. (III). metabolism in rats and dogs)

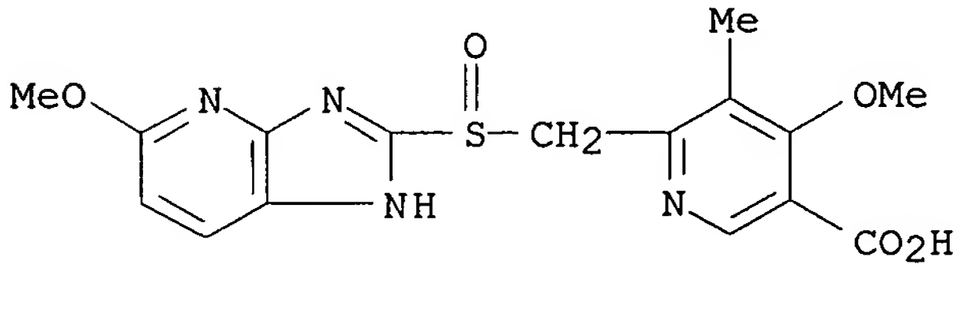
RN 113713-24-9 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]thio]- (CA INDEX NAME)



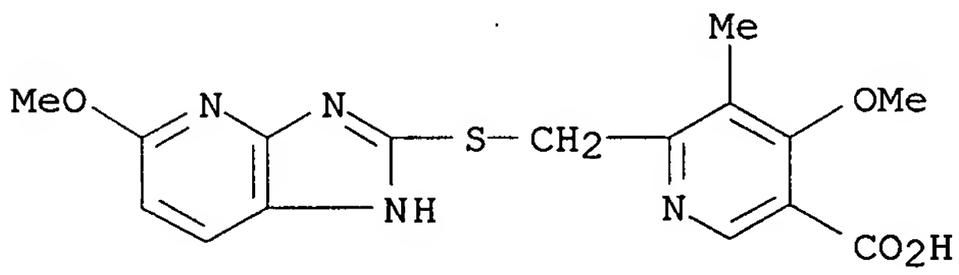
RN 223713-77-7 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfonyl]- (9CI) (CA INDEX NAME)



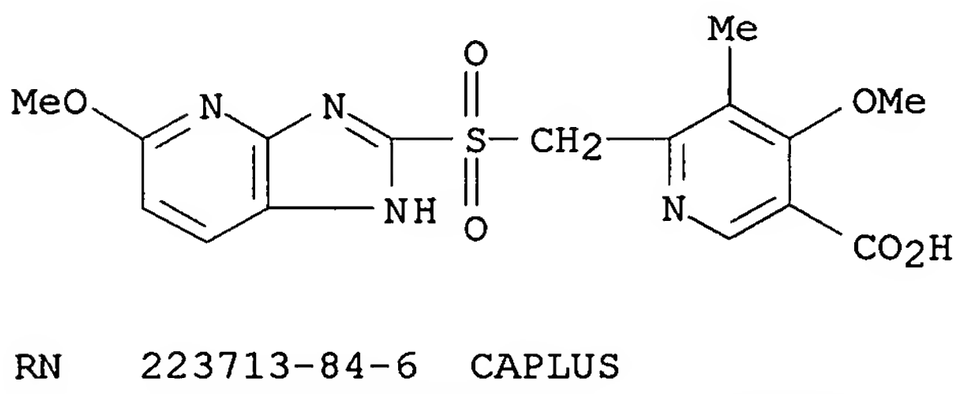
RN 223713-78-8 CAPLUS
CN 3-Pyridinecarboxylic acid, 4-methoxy-6-[[(5-methoxy-1H-imidazo[4,5-b]pyridin-2-yl)sulfinyl]methyl]-5-methyl- (9CI) (CA INDEX NAME)



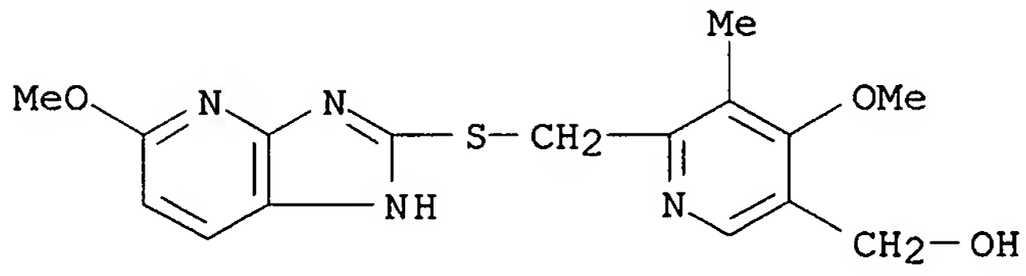
RN 223713-79-9 CAPLUS
CN 3-Pyridinecarboxylic acid, 4-methoxy-6-[[(5-methoxy-1H-imidazo[4,5-b]pyridin-2-yl)thio]methyl]-5-methyl- (9CI) (CA INDEX NAME)



RN 223713-80-2 CAPLUS
CN 3-Pyridinecarboxylic acid, 4-methoxy-6-[[(5-methoxy-1H-imidazo[4,5-b]pyridin-2-yl)sulfonyl]methyl]-5-methyl- (9CI) (CA INDEX NAME)

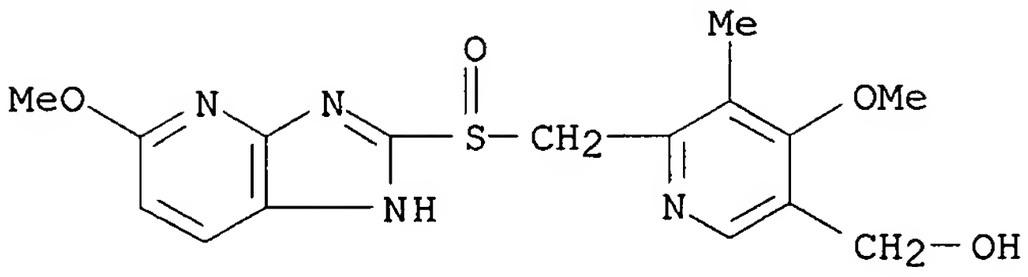


RN 223713-84-6 CAPLUS
CN 3-Pyridinemethanol, 4-methoxy-6-[[(5-methoxy-1H-imidazo[4,5-b]pyridin-2-yl)thio]methyl]-5-methyl- (9CI) (CA INDEX NAME)

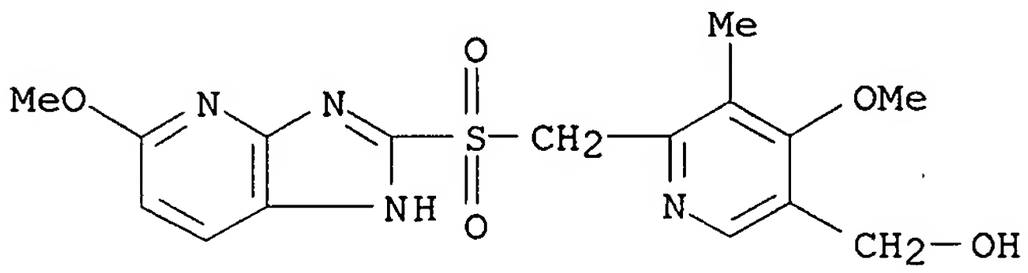


RN 223713-85-7 CAPLUS
CN 3-Pyridinemethanol, 4-methoxy-6-[[(5-methoxy-1H-imidazo[4,5-b]pyridin-2-

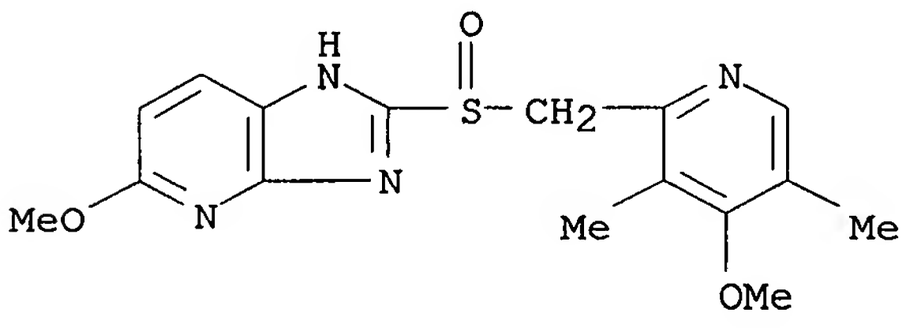
yl)sulfinyl]methyl]-5-methyl- (9CI) (CA INDEX NAME)



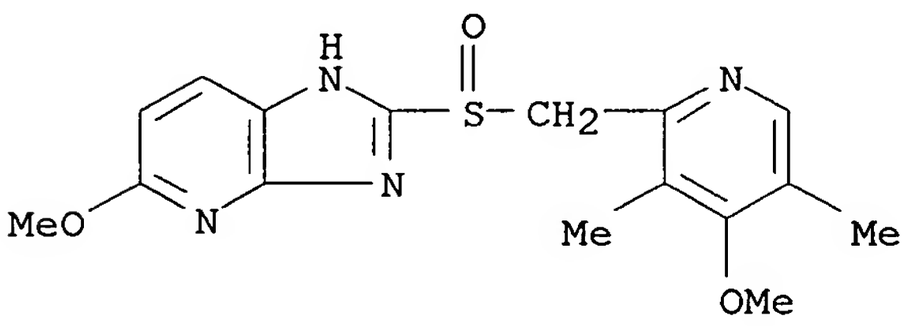
RN 223713-86-8 CAPLUS
CN 3-Pyridinemethanol, 4-methoxy-6-[[(5-methoxy-1H-imidazo[4,5-b]pyridin-2-yl)sulfonyl]methyl]-5-methyl- (9CI) (CA INDEX NAME)



L5 ANSWER 39 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:87680 CAPLUS
DOCUMENT NUMBER: 130:305983
TITLE: Pharmacokinetic studies of TU-199. (II). Absorption, distribution and excretion after multiple administration to rats and transfer into fetus and milk
AUTHOR(S): Esumi, Yoshio
CORPORATE SOURCE: Tokai Res. Laboratories, Daiichi Pure Chemicals Co., Ltd., Japan
SOURCE: Yakuri to Chiryo (1998), 26(12), 2007-2016
CODEN: YACHDS; ISSN: 0386-3603
PUBLISHER: Raifu Saiensu Shuppan K.K.
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB The pharmacokinetics of TU-199 were studied in male and pregnant female rats following repeated and single administration, resp., using 14C-TU-199. The results are discussed with regard to tissue distribution and excretion and transfer into the fetus and milk during pregnancy.
IT 113712-98-4, TU-199
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(pharmacokinetic studies of TU-199. (II). Absorption, distribution and excretion after multiple administration to rats and transfer into fetus and milk)
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 40 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:87677 CAPLUS
DOCUMENT NUMBER: 130:305982
TITLE: Pharmacokinetic studies of TU-199. (I). Absorption, distribution and excretion after single administration to rats and dogs
AUTHOR(S): Esumi, Yoshio
CORPORATE SOURCE: Tokai Res. Laboratories, Daiichi Pure Chemicals Co., Ltd., Japan
SOURCE: Yakuri to Chiryo (1998), 26(12), 1993-2005
CODEN: YACHDS; ISSN: 0386-3603
PUBLISHER: Raifu Saiensu Shuppan K.K.
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB The pharmacokinetics of TU-199 e.g. absorption, distribution and excretion were studied in rats and dogs following oral or i.v. administration of 14C-TU-199.
IT 113712-98-4, TU-199
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(pharmacokinetic studies of TU-199. (I). Absorption, distribution and excretion after single administration to rats and dogs)
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



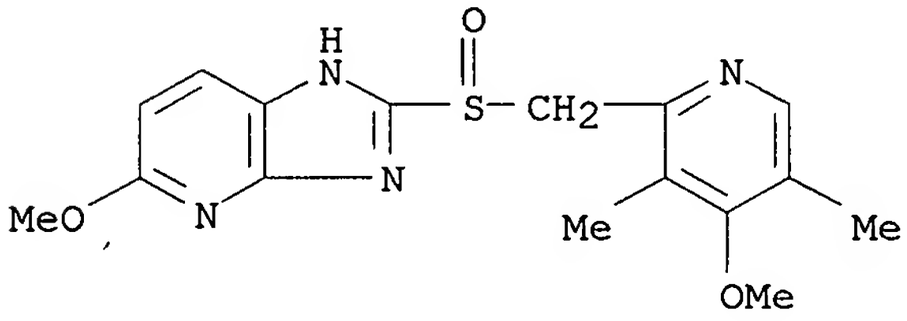
L5 ANSWER 41 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:87668 CAPLUS
DOCUMENT NUMBER: 130:306367
TITLE: Mutagenicity study on TU-199
AUTHOR(S): Daigo, Hideo; Baba, Katsuyuki; Morotome, Kazuo
CORPORATE SOURCE: Safety Evaluation Group Kazusa Res. Laboratories R & D Div., Tokyo Co., Ltd., Kisarazu shi, Chiba, 292-0812, Japan
SOURCE: Yakuri to Chiryo (1998), 26(12), 1979-1992
CODEN: YACHDS; ISSN: 0386-3603
PUBLISHER: Raifu Saiensu Shuppan K.K.
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB A reverse mutation study using bacteria, a chromosomal aberration study using CHKL/IU cell and micronucleus test on TU-199, an anti-ulcer drug under development were conducted in mice. A reverse mutation study was performed using 5 bacterial strains (Salmonella typhimurium TA98, TA100, TA1535, TA1537 and Escherichia coli WP2 uvrA) by the direct method and the metabolic activation method by including a pre-incubation process. TU-199 did not increase the number of revertant colonies of any strain compared to the neg. controls in either the direct method or the metabolic activation method, indicating that it has no potential to induce reverse mutation. A chromosomal aberration study was performed using a Chinese hamster lung fibroblast cell line (CHL/IU) by the direct method and the metabolic

activation method. After treatment with TU-199, the incidence of cells with structurally aberrant chromosomes was less than 5% in both the direct metabolic activation methods, indicating that TU-199 does not induce chromosomal aberration. A micronucleus test was performed by oral administration in 8-wk-old male ICR mice. No significant increase was observed in the incidence of micronuclei in polychromatic or normochromatic erythrocytes after administration of TU-199, indicating that TU-199 does not induce micronuclei under the conditions of the present study. Thus, from the results of these three test, we concluded that TU-199 does not cause mutation.

IT 113712-98-4, TU-199
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(mutagenicity study on TU-199)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 42 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:87615 CAPLUS
DOCUMENT NUMBER: 130:306366
TITLE: Teratological study by oral administration of TU-199 in rabbits
AUTHOR(S): Umemura, Tatsuo; Ishikura, Toshikazu; Morohashi, Tetsuo; Tamaki, Yasushi; Morolome, Kazuo
CORPORATE SOURCE: Kannami Lab. Bozo Res. Center Inc., Kannami-cho, Tagata-gun, Shizuoka, 419-0101, Japan
SOURCE: Yakuri to Chiryo (1998), 26(12), 1969-1978
CODEN: YACHDS; ISSN: 0386-3603
PUBLISHER: Raifu Saiensu Shuppan K.K.
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

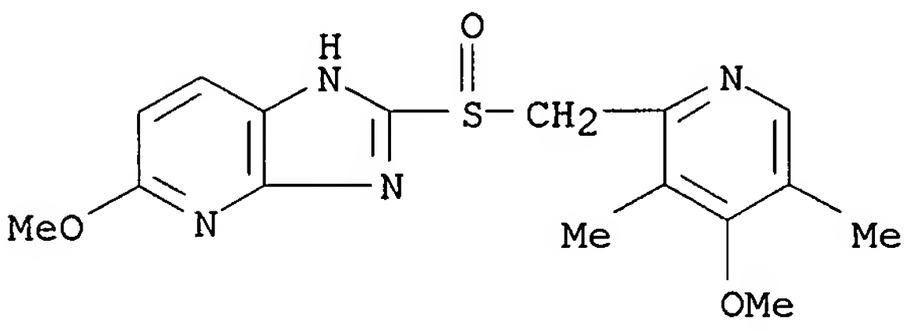
AB A study was conducted in which TU-199 was administered orally to New Zealand White (Kbl:NZW) SPF rabbits, at dose levels of 2, 10, 5 and 250 mg/kg, once daily for a period of 13 days from day 6 to day 18 of gestation, which corresponds to the period of fetal organogenesis, and the effects on dams and their fetuses were examined 1) Dams: In the dams, no effects from administration of the test article were observed in the 10 mg/kg and below groups. In the 50 and 250 mg/kg groups, a decrease in or depressed body weight gains were seen during the administration period and food consumption was also low. In the 250 mg/kg group, there was a decrease in the amount of feces and the excretion of reddish brown urine was noted in many animals. There were also some animals which aborted. In addition, in the same group, stomach wts. showed significantly high values. However, in the macropathol. findings and findings at Cesarean section, no effects from administration of the test article were observed 2) Fetuses: For the fetuses, no effects from administration of the test article were seen on survival and growth in any of the treatment groups and no teratogenic effects were observed Based on the above results and under the conditions of this study, the no-effect dose level for TU-199 was determined to be 10 mg/kg for general toxicol. effects on dams, 50 mg/kg for reproduction,

and 250 mg/kg for effects on fetuses, and at 250 mg/kg it was judged to have no teratogenic effects.

IT 113712-98-4, TU-199
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(teratol. study by oral administration of TU-199 in rabbits)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 43 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:87587 CAPLUS

DOCUMENT NUMBER: 130:306365

TITLE: Teratological study by oral administration of TU 199 in rats

AUTHOR(S): Ishida, Shigeru; Fujioka, Minoru; Morohashi, Tetsuo; Tamaki, Yasushi; Morotome, Kazuo

CORPORATE SOURCE: Gotemba Lab. Bozo Res. Center Inc., Gotemba City Shizuoka, 412-0039, Japan

SOURCE: Yakuri to Chiryo (1998), 26(12), 1951-1968
CODEN: YACHDS; ISSN: 0386-3603

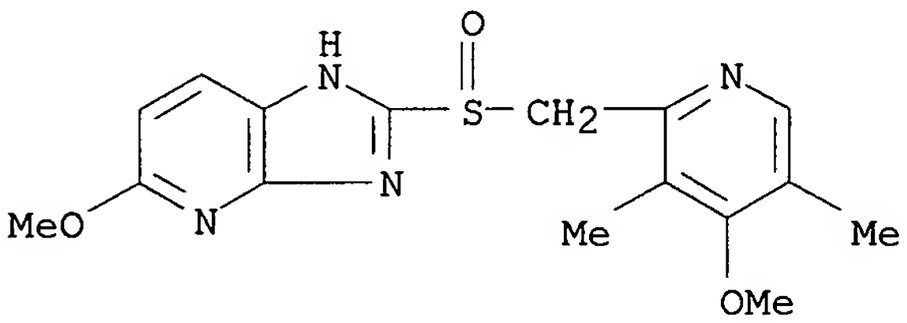
PUBLISHER: Raifu Saiensu Shuppan K.K.

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB A teratol. study was conducted in which TU-199 was administered orally by gavage to Crj:CD (SD) SPF rats, at dose levels of 4, 20, 100 and 500 mg/kg, for an 11-day period from day 7-17 of gestation, and the effects on dams, fetuses and newborn pups were examined 1) Dams: In the general condition, reddish brown urine, thought to be discoloration caused by metabolites, was observed in the 500 mg/kg group. In the body weight and food consumption, mildly depressed body weight gains and a decrease in food consumption were seen in the 500 mg/kg group during the administration period. In the macropathol. findings and absolute organ wts. at Cesarean section and weaning, no effects from administration of the test article were observed 2) Dams reproductive performance: There were no premature or aborted birth in any of the test groups and no effects from administration of the test article were observed in the Cesarean section data or parturition and lactation condition. 3) Fetuses: There was no decrease in the implantation index and no increase in the ratio of dead/resorbed fetuses in any of the test groups. In addition, there were no significant differences in the body weight of the live fetuses in each test group and no effects from administration of the test article were observed in the external, visceral and skeletal examns. 4) Newborn pups: No effects from administration of the test article were seen in any of the test groups in the external observation, body weight, viability, external differentiation, visceral examination of stillborn pups and pups that died, macropathol. findings at each stage, functional, behavioral and reproductive performance tests. Based on the above results and under the conditions of this study, it was determined that the general toxicol. no-effect dose level for dams was 100 mg/kg and the no-effect dose level for dams reproductive performance and for fetuses and newborn pups was 500 mg/kg.

IT 113712-98-4, TU 199
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(teratol. study by oral administration of TU 199 in rats)
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



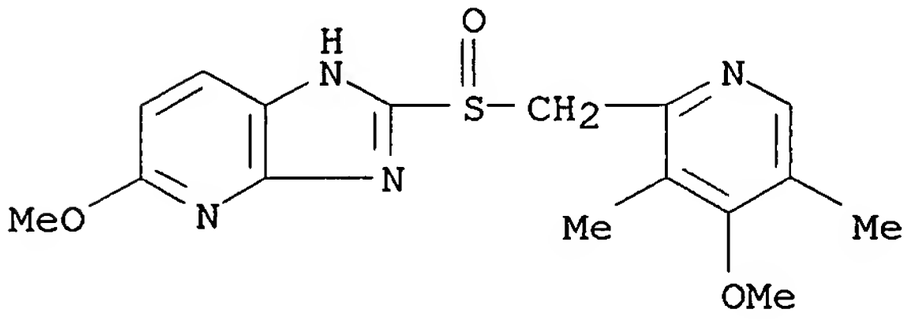
L5 ANSWER 44 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:87538 CAPLUS
DOCUMENT NUMBER: 130:306364
TITLE: Thirteen-week oral toxicity study followed by five-week recovery study of TU-199 in beagle dogs
AUTHOR(S): Okamoto, Masami; Takahashi, Eiji; Akai, Hiroyuki; Tamura, Kazutoshi; Tagishi, Soichiro; Morohashi, Tetuo; Morotome, Kazuo
CORPORATE SOURCE: Kannami Lab. Bozo Res. Center Inc., Kannami-cho, Tagata-gun, Shizuoka, 419-0101, Japan
SOURCE: Yakuri to Chiryo (1998), 26(12), 1923-1949
CODEN: YACHDS; ISSN: 0386-3603
PUBLISHER: Raifu Saiensu Shuppan K.K.
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB A repeat administration toxicity study was conducted in which TU-199 was administered orally by gavage, at dose levels of 0.5, 5, 50 and 500 mg/kg to groups of 6 male and 6 female beagle dogs, daily for 13 wk. For 2 males and 2 females in each group, the drug was withdrawn for 5 wk and the reversibility examined There were no deaths in males or females in the control group nor in any of the treatment groups. In the general condition, a high frequency of vomiting was seen in males and females in the 500 mg/kg group in week 1 or administration, and stool mixed with the test article was seen during the administration period in males and females in the 50 mg/kg and above groups. In the blood chemical, a high value for urea nitrogen was seen in males in the 500 mg/kg group. In the measurement of serum gastrin concentration, high values were seen in males and females in the 5 mg/kg and above groups. In the pathol. examination, changes in the stomach were seen in males and females in the 5 mg/kg and above groups and a change in the thyroid in males and females in the 500 mg/kg group. In the stomach, dilation and hypertrophy of the mucous membrane in the body of the stomach were seen macroscopically, and histol., hypertrophy together with edema and fibrosis of the mucous membrane in the corpus ventriculi, and increase in parietal cells, vacuolation of the parietal cells, dilation of the fundic glands and partial epithelial necrosis in the fundic glands were seen. In the thyroid, hypertrophy of the follicular epithelial cells was seen. No changes thought to be effects from administration of the test article were seen in the body weight, food consumption, urinalysis, hematol., ophthalmol. or electrocardiograms. In the recovery study with withdrawal of the drug for 5 wk, changes were seen only in the stomach and the other changes seen during the administration period were not observed The changes in the stomach were, dilation and hypertrophy of the mucous membrane in the body of the stomach

seen macroscopically in the 5 mg/kg and above groups, but histol., only a slight increase in parietal cells was seen in the 50 and 500 mg/kg groups, and the change was considered to be reversible. Based on the above results, the no-effect dose level of TU-199 in a 13 wk repeat administration toxicity study by oral administration in beagle dogs was judged to be 0.5 mg/kg day.

IT 113712-98-4, TU-199
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(thirteen-week oral toxicity study followed by five-week recovery study of TU-199 in beagle dogs)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 45 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:87487 CAPLUS

DOCUMENT NUMBER: 130:306363

TITLE: Thirteen-week oral toxicity study followed by five-week recovery study of TU-199 in rats

AUTHOR(S): Morohashi, Tetsuo; Tagishi, Soichiro; Sakurada, Hiroshi; Sebata, Noriyuki; Morotome, Kazuo

CORPORATE SOURCE: Safety Evaluation Group Kazusa Res. Laboratories R & D Div., Tokyo Tanabe Co., Ltd., Kisarazu-shi, Chiba, 292-0812, Japan

SOURCE: Yakuri to Chiryo (1998), 26(12), 1897-1922
CODEN: YACHDS; ISSN: 0386-3603

PUBLISHER: Raifu Saiensu Shuppan K.K.

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

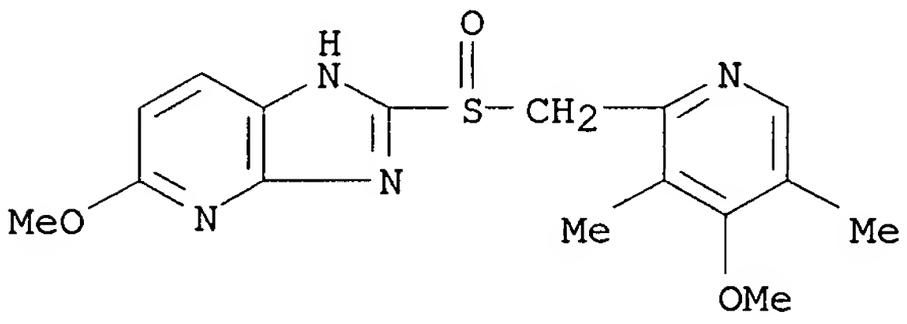
AB A short-term oral toxicity study of TU-199, which is expected to be useful as an anti-peptic ulcer drug, was conducted using rats as a part of its safety evaluation program. TU-199 was orally administered at 10, 30, 100 and 500 mg/kg for 13 wk. Reversibility was evaluated after a 5-wk drug-free rest period. No animal died during the study period and no change attributable to the test material was observed in body weight or food consumption. In the observation of general symptoms and urinalysis, males given 100 mg/kg or greater doses and females given 500 mg/kg showed red-brown urine, which was thought to reflect the color of metabolites. Changes attributable to the test material were observed mainly in the stomach, liver and thyroid. Regarding the stomach, males and females from all treated groups showed increases in weight and eosinophilia of secretory granules associated with hypertrophy of chief cells, changes which were thought to be due to pharmacol. activity of the drug. Males given 100 mg/kg or greater doses and females given 110 mg/kg or greater doses sporadically showed slight single-cell necrosis in the chief cell region. Males given 30 mg/kg or greater doses and females given 100 mg/kg or greater doses showed increases in liver weight and changes such as decreases in transaminase levels and increases in total cholesterol levels. Males and females given 500 mg/kg showed decreases in thyroid colloid. Males given 500 mg/kg also showed decreases in T3 levels and slight anemia.

These changes were reversed or showed a tendency to reversal during a 5-wk drug-free rest period, indicating that they are reversible. In conclusion, the toxicol. no-observed effect level in males and females were thought to be 30 mg/kg and 10 mg/kg or below because single-cell necrosis were not observed in the chief cell region.

IT 113712-98-4, TU-199
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(thirteen-week oral toxicity study followed by five-week recovery study of TU-199 in rats)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 46 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:171958 CAPLUS
DOCUMENT NUMBER: 124:212082
TITLE: Multiple unit pharmaceutical preparations containing proton pump inhibitor
INVENTOR(S): Bergstrand, Pontus John Arvid; Loevgren, Kurt Ingmar
PATENT ASSIGNEE(S): Astra Aktiebolag, Swed.
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9601624	A1	19960125	WO 1995-SE678	19950607 <--
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2170644	A1	19960125	CA 1995-2170644	19950607 <--
CA 2170995	A1	19960126	CA 1995-2170995	19950607 <--
AU 9529938	A	19960209	AU 1995-29938	19950607 <--
AU 695971	B2	19980827		
EP 723437	A1	19960731	EP 1995-926055	19950607 <--
EP 723437	B1	20040908		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CN 1134667	A	19961030	CN 1995-190816	19950607 <--
CN 1134668	A	19961030	CN 1995-190819	19950607 <--
JP 09502740	T	19970318	JP 1996-504249	19950607 <--
JP 3878669	B2	20070207		
HU 75934	A2	19970528	HU 1996-574	19950607 <--
BR 9506028	A	19971014	BR 1995-6028	19950607 <--

EE 3292	B1	20001016	EE 1996-32	19950607	<--
PL 180598	B1	20010330	PL 1995-313388	19950607	<--
RU 2166935	C2	20010520	RU 1996-107040	19950607	<--
SK 283841	B6	20040302	SK 1996-300	19950607	<--
EP 1452172	A2	20040901	EP 2004-11147	19950607	<--
EP 1452172	A3	20041103			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV					
AT 275396	T	20040915	AT 1995-926055	19950607	<--
CZ 294380	B6	20041215	CZ 1996-730	19950607	<--
PT 723437	T	20041231	PT 1995-926055	19950607	<--
ES 2227556	T3	20050401	ES 1995-926055	19950607	
TW 421599	B	20010211	TW 1995-84106116	19950615	<--
IN 1995DE01121	A	20050311	IN 1995-DE1121	19950616	
IN 1995DE01122	A	20050311	IN 1995-DE1122	19950616	
US 5753265	A	19980519	US 1995-464774	19950622	<--
ZA 9505546	A	19960108	ZA 1995-5546	19950704	<--
ZA 9505547	A	19960108	ZA 1995-5547	19950704	<--
IL 114447	A	20020912	IL 1995-114447	19950704	<--
FI 9601058	A	19960307	FI 1996-1058	19960307	<--
FI 9601059	A	19960307	FI 1996-1059	19960307	<--
NO 9600948	A	19960307	NO 1996-948	19960307	<--
NO 316863	B1	20040607			
HK 1008298	A1	20050218	HK 1998-109226	19980717	
PRIORITY APPLN. INFO.:			SE 1994-2431	A 19940708	
			EP 1995-926055	A3 19950607	
			WO 1995-SE678	W 19950607	

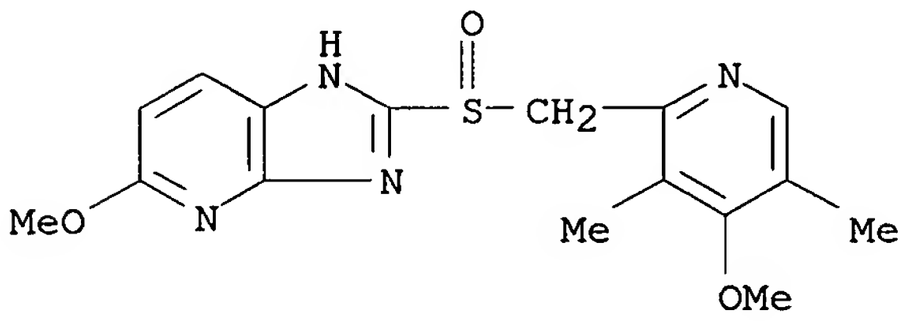
OTHER SOURCE(S): MARPAT 124:212082

AB A new pharmaceutical multiple unit tabletted dosage form containing an acid labile H+K+-ATPase inhibitor or an alkaline salt thereof or one of its single enantiomers or an alkaline salt thereof is claimed. Tablet core containing lansoprazole 400, sugar sphere seeds 400, HPMC 82, Na lauryl sulfate 3, and water 1600 were coated with a separating layer in a fluid bed apparatus containing talc and Mg stearate and HPMC. An enteric coating solution cong. methacrylic acid copolymer and polysorbate and glycerides was sprayed onto the pellets covered with separating layer in a fluid bed apparatus Enteric coating layer pellets 82 and microcryst. cellulose 191 g were mixed and compressed into tablets.

IT 113712-98-4
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(multiple unit pharmaceutical prepns. containing proton pump inhibitor)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 47 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:753867 CAPLUS

DOCUMENT NUMBER: 123:179490

TITLE: Stabilized preparations containing antiulcer agents and inorganic salts

INVENTOR(S): Matsushita, Tomohisa; Hashimoto, Akio

PATENT ASSIGNEE(S): Tokyo Tanabe Co, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

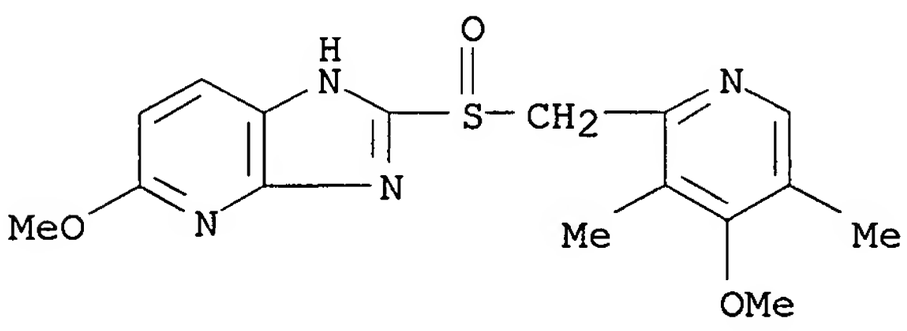
PATENT NO.	KIND	DATE	APPLICATION NO.		DATE	
JP 07157430	A	19950620	JP 1994-242687		19941006	<--
PRIORITY APPLN. INFO.:			JP 1994-242687	A	19941006	
			JP 1993-254048		19931012	

AB Stable prepns. contain acid-labile antiulcer 2-[[(2-pyridyl)methyl]sulfinyl]imidazo[4,5-b]pyridines and basic inorg. salts as stabilizers. TU-199 (1 g) was mixed with 1 g Al(OH)3 gel and left at 40° and 75% relative humidity for 2 wk to show no discoloration.

IT 113712-98-4, TU 199
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(stabilization of antiulcer imidazopyridines by inorg. basic salts)

RN 113712-98-4 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



L5 ANSWER 48 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:677361 CAPLUS
DOCUMENT NUMBER: 123:65832
TITLE: Tablet containing enteric granules
INVENTOR(S): Matsushita, Tomohisa; Hashimoto, Mitsuo
PATENT ASSIGNEE(S): Tokyo Tanabe Co. Ltd., Japan
SOURCE: PCT Int. Appl., 13 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

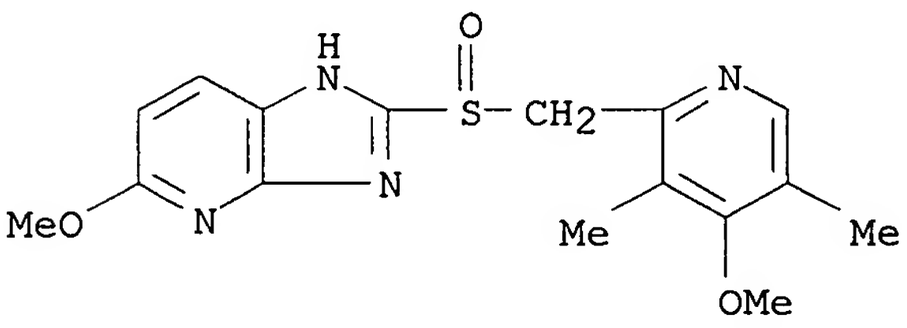
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9510264	A1	19950420	WO 1994-JP1675	19941006	<--
W: AU, CA, JP, KR, US					
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
CA 2173506	A1	19950420	CA 1994-2173506	19941006	<--
CA 2173506	C	20060509			
AU 9478222	A	19950504	AU 1994-78222	19941006	<--
AU 683092	B2	19971030			
EP 723777	A1	19960731	EP 1994-929012	19941006	<--
EP 723777	B1	20020703			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE					
AT 219931	T	20020715	AT 1994-929012	19941006	<--
PT 723777	T	20021129	PT 1994-929012	19941006	<--
ES 2179079	T3	20030116	ES 1994-929012	19941006	<--

JP 3710473	B2	20051026	JP 1995-511580		19941006
US 5798120	A	19980825	US 1996-624510		19960405 <--
PRIORITY APPLN. INFO.:			JP 1993-254049	A	19931012
			WO 1994-JP1675	W	19941006

AB A tablet comprises enteric granules prepared by tableting a mixture of enteric granules containing a basis with at least one member selected from the group consisting of synthetic hydrotalcite, dried aluminum hydroxide gel, a coppt. of aluminum hydroxide with sodium hydrogencarbonate, aluminum magnesium hydroxide, synthetic aluminum silicate and dihydroxyaluminum aminoacetate. As compared with the conventional tablets containing coated granules, this tablet has the following advantages: the content of enteric granules is increased by using a specified filler; the basis is rapidly dispersed in the granules; the granules have drug-release ability and acid resistance comparable tablet has a high strength. The technique of preparing a tablet having a high enteric granule content has merits of an improved administrability due to a reduced size of the tablet and the applicability to other drugs.

IT 113712-98-4
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Tablet containing enteric granules comprising hydrotalcite or other substances)

RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



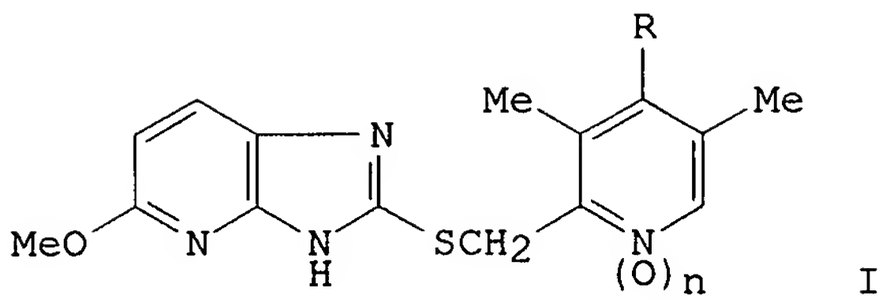
L5 ANSWER 49 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:	1994:164168 CAPLUS
DOCUMENT NUMBER:	120:164168
TITLE:	Preparation of 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridyl)methyl]thio]imidazo[4,5-b]pyridine and its intermediates
INVENTOR(S):	Amano, Michiaki; Takeda, Haruki
PATENT ASSIGNEE(S):	Tokyo Tanabe Co, Japan
SOURCE:	Jpn. Kokai Tokkyo Koho, 11 pp. CODEN: JKXXAF
DOCUMENT TYPE:	Patent
LANGUAGE:	Japanese
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05222038	A	19930831	JP 1992-25002	19920212 <--
JP 3158599	B2	20010423		
PRIORITY APPLN. INFO.:			JP 1992-25002	19920212
OTHER SOURCE(S):	CASREACT 120:164168			

GI



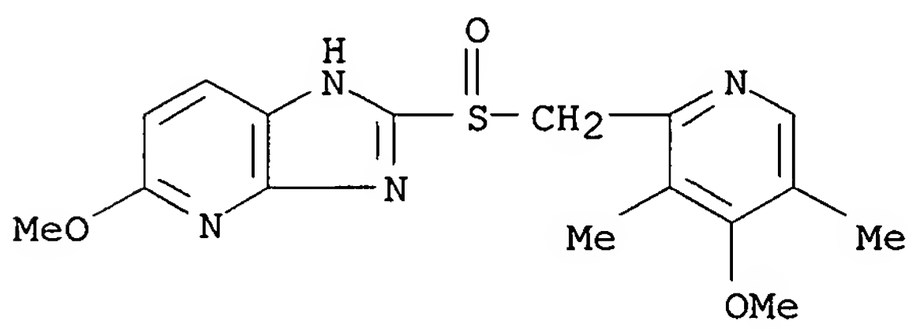
I

AB The title compound (I; R = MeO, n = 0) (II), useful as an intermediate for a known antiulcer agent, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridyl)methyl]sulfinyl]imidazo[4,5-b]pyridine, is prepared Thus, 4-chloro-2-chloromethyl-3,5-dimethylpyridine N-oxide was stirred with 2-mercapto-5-methoxyimidazo[4,5-b]pyridine in EtOH at 35° for 2.5 h to give 82% I (R = Cl, n = 1) which was refluxed with NaOMe in MeOH-PhMe for 4 h to give 71% I (R = MeO, n = 1). This was stirred with PCl3 in CH2Cl2 at room temperature for 3 h to give 95% II.

IT 113712-98-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(intermediate for, methoxy[(methoxydimethylpyridyl)methyl]thio]imidazopyridine as)

RN 113712-98-4 CAPLUS

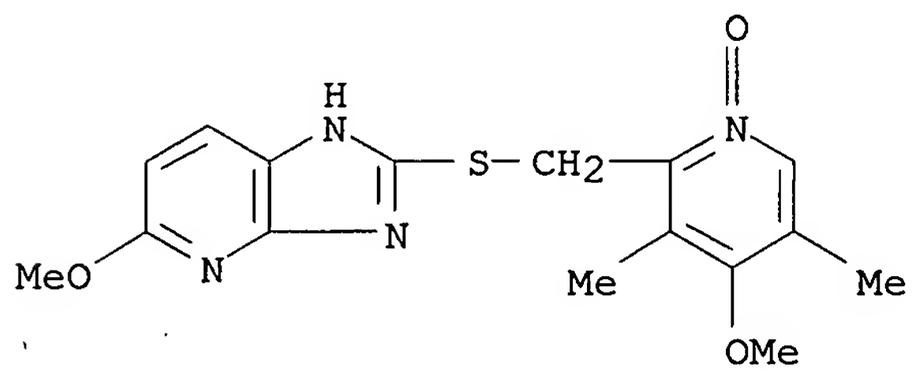
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



IT 153476-64-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reduction of)

RN 153476-64-3 CAPLUS

CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-1-oxido-2-pyridinyl)methyl]thio]- (9CI) (CA INDEX NAME)

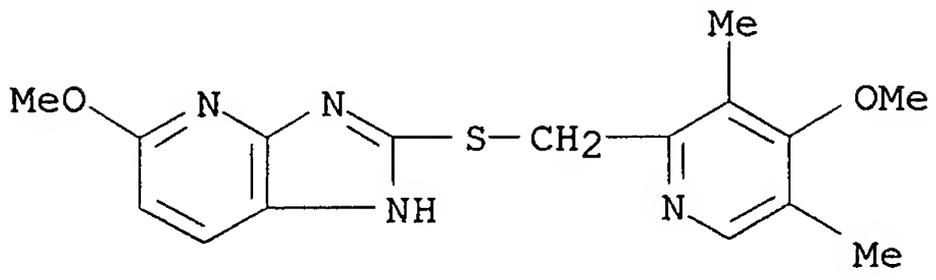


IT 113713-24-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as antiulcer agent, intermediates and process for)

RN 113713-24-9 CAPLUS

CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-

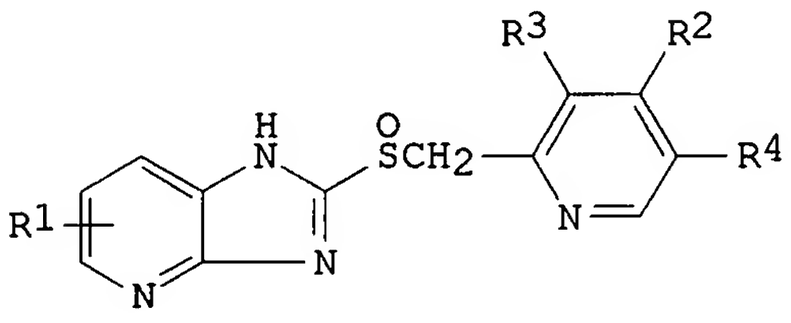
pyridinyl)methyl]thio]- (CA INDEX NAME)



L5 ANSWER 50 OF 50 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1988:150480 CAPLUS
DOCUMENT NUMBER: 108:150480
TITLE: Preparation, testing, and formulation of pyridylmethylsulfinylimidazopyridines as ulcer inhibitors
INVENTOR(S): Matsuishi, Naoto; Takeda, Haruki; Iizumi, Kenichi; Murakami, Kiyokazu; Hisamitsu, Akira
PATENT ASSIGNEE(S): Tokyo Tanabe Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 28 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 254588	A1	19880127	EP 1987-306570	19870724 <--
EP 254588	B1	19920115		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 63146882	A	19880618	JP 1987-133534	19870530 <--
JP 06043426	B	19940608		
AU 8775628	A	19880128	AU 1987-75628	19870714 <--
AU 598564	B2	19900628		
ZA 8705151	A	19880330	ZA 1987-5151	19870714 <--
CA 1329204	C	19940503	CA 1987-542637	19870721 <--
HU 46000	A2	19880928	HU 1987-3407	19870724 <--
US 4808596	A	19890228	US 1987-77686	19870724 <--
AT 71626	T	19920215	AT 1987-306570	19870724 <--
ES 2038184	T3	19930716	ES 1987-306570	19870724 <--
PRIORITY APPLN. INFO.:			JP 1986-173551 A	19860725
			JP 1987-133534 A	19870530
			EP 1987-306570 A	19870724

OTHER SOURCE(S): CASREACT 108:150480; MARPAT 108:150480
GI



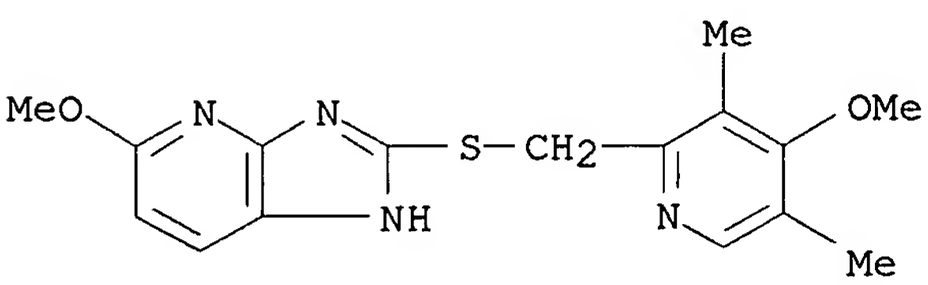
I

AB The title compds. [I; R1 = (cycloalkyl)alkoxy, fluoroalkoxy; R2 = H, Me, MeO; R3,R4 = H, Me] were prepared as ulcer inhibitors. 2-Mercapto-5-methoxyimidazo[4,5-b]pyridino-2-chloromethyl-3,5-dimethylpyridine.HCl, and

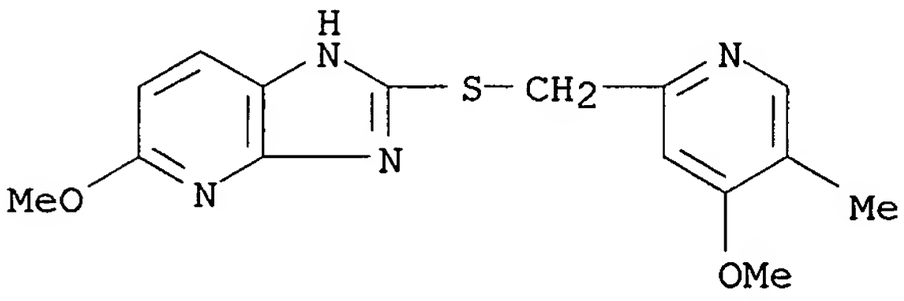
KOH were refluxed 2 h in EtOH to give 2-[2-(3,5-dimethyl)pyridylmethylthio]-5-methoxyimidazo[4,5-b]pyridine. No procedure was given for oxidation of the latter to the corresponding I. I inhibited gastric acid secretion in rats with ED50's of 9-73 mg/kg orally.

IT 113713-24-9 113713-26-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, in preparation of ulcer inhibitor)

RN 113713-24-9 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]thio]- (CA INDEX NAME)

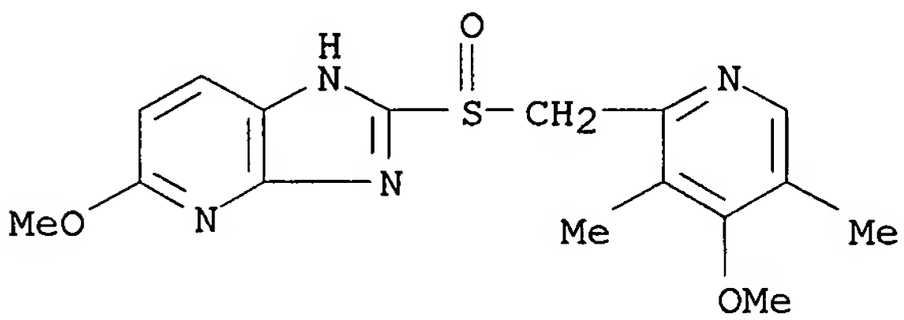


RN 113713-26-1 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-5-methyl-2-pyridinyl)methyl]thio]- (9CI) (CA INDEX NAME)

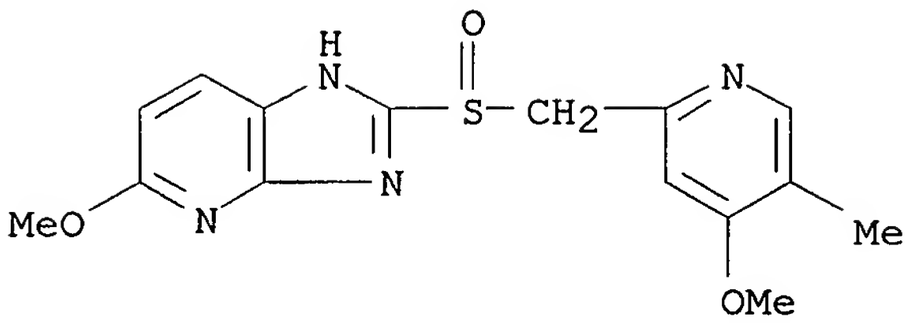


IT 113712-98-4P 113713-00-1P 113713-61-4P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as ulcer inhibitor)

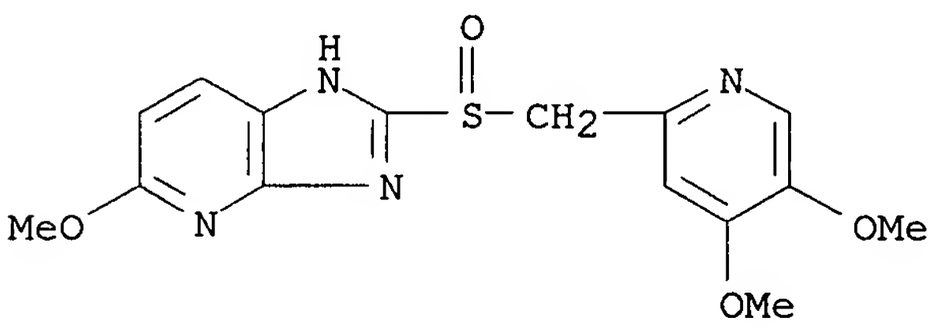
RN 113712-98-4 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- (CA INDEX NAME)



RN 113713-00-1 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 5-methoxy-2-[[(4-methoxy-5-methyl-2-pyridinyl)methyl]sulfinyl]- (9CI) (CA INDEX NAME)



RN 113713-61-4 CAPLUS
CN 1H-Imidazo[4,5-b]pyridine, 2-[[(4,5-dimethoxy-2-pyridinyl)methyl]sulfinyl]-5-methoxy- (9CI) (CA INDEX NAME)



```
=> d his

     (FILE 'HOME' ENTERED AT 06:11:03 ON 14 AUG 2007)

     FILE 'REGISTRY' ENTERED AT 06:11:12 ON 14 AUG 2007
L1             STRUCTURE UPLOADED
L2               1 S L1
L3              54 S L1 FULL

     FILE 'CAPLUS' ENTERED AT 06:11:55 ON 14 AUG 2007
L4             119 S L3 FULL
L5              50 S L4 AND PY<2005

=> log y
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                     ENTRY    SESSION
FULL ESTIMATED COST                                 269.74     444.00

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
                                                     ENTRY    SESSION
CA SUBSCRIBER PRICE                                 -39.00     -39.00

STN INTERNATIONAL LOGOFF AT 06:17:22 ON 14 AUG 2007
```